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ANUAL

OF

DISEASES OF THE SKIN:

FROM THE FRENCH OF CAZENAVE.

WITH

NOTES AND ADDITIONS.

BY

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SECOND EDITION,

CONSIDERABLY ENLARGED AND IMPROVED.

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PREFACE.

Many improvements have been made in Cutaneous, as in general, pathology, since the first edition of this Manual was published.

Indeed, within the last twenty years Medicine has been so changed—so revolutionized—as to become almost an entirely *new* science; and for this onward movement we are mainly indebted to the stethoscope, the microscope, organic chemistry, and a more logical and exact method of observation, than had prevailed, when medical science, oppressed with the nightmare of routine, "groped and guessed." The purging and bleeding practice, especially with reference to cutaneous affections, and the drugging and drenching system, in relation to diseases in general, no longer obstruct the progress of rational medicine. The march of Science will prevent these exploded errors from ever being revived.

The treatment of Cutaneous Diseases has largely participated in the general improvement of practical medicine. The obscurity in which this subject was formerly involved has been in great measure removed; and although we are as yet unable to form a Classification of Diseases of the Skin, upon a basis that will endure, still we have succeeded through the means of their *differential diagnosis* in arriving at a few simple principles which are unerring guides to the proper treatment of these complaints.

In the present edition, which is almost re-written, and considerably enlarged, I have endeavoured to keep the subject of Cutaneous pathology *au courant* with the general progress of science; and in doing so, I have not hesitated to dispute the accuracy of those statements in the original, which seem opposed to

facts, and to the generally received opinions of the day; as, for example, on the subject of Herpes Tonsurans, and on the Vegetable parasites found in certain diseases of the scalp.

M. Cazenave is a worthy successor of Biett and Alibert at the Hospital of St. Louis, and the doctrines which emanate from that noble institution must always have a paramount influence on the history of Cutaneous pathology. The Hospital of St. Louis contains 940 beds. Of these, 140 are devoted to surgical cases; 100 to general diseases; 100 to scrofula; and 20 to women in labour. The remaining beds, nearly 600, are occupied by persons labouring under skin diseases. So that more Cutaneous affections may be seen in a fortnight at St. Louis, than in five years at our largest London hospital. Besides the internal patients, there are from 100 to 150 out-door skin-patients seen and prescribed for, every Monday, at the dispensary attached to the hospital.

To the Hospital of St. Louis, to Biett, and especially to M. Cazenave, I am indebted for a great portion of the information which I possess on the subject matter of this volume. I must also add that to the friendship and enlightened liberality of the last-named eminent physician, I owe many facilities for acquiring information recently at St. Louis, which otherwise I might not have enjoyed. The European reputation of M. Cazenave's Manual is sufficient guarantee for the value of the work. A volume that has been rendered into the language of every country in which medicine is cultivated as a science, needs no further eulogium to recommend it to the profession.

The notes, and additions to the original text, for which I am responsible, are included within brackets [ ], or distinguished by the initial B.

T. H. Burgess.

12, *Half-Moon Street, Piccadilly,*
April, 1854.

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PREPARING FOR PUBLICATION,

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AN ATLAS OF COLOURED PLATES,

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PRINCIPAL DISEASES OF THE SKIN.

INTRODUCTION.

[The early writers on Diseases of the Skin detached this class of affections from general pathology, for the purpose of studying their history more intimately than had been done by systematic writers on medicine. As a means of arriving at a more precise nomenclature and accurate diagnosis than had hitherto prevailed, the adoption of this course has been attended with great advantage; but, unfortunately, the relation of Cutaneous Diseases to General Pathology has been too frequently overlooked in the anxiety to establish nice distinctions and correct classifications. The result is, that the source which has furnished us with those indispensable elements for the study of this branch of medicine, has also served to perpetuate erroneous views as to the nature of the diseases themselves, and an irrational empiricism as regards their treatment. In point of fact, the subject of cutaneous pathology has been too long specialized and viewed as a distinct branch of medicine, having little or no connexion with any other; whereas the great majority of cutaneous affections are *symptomatic* of other diseases affecting different organs, and are but the outward manifestation of these complaints, or an accompanying symptom.

Several recent German writers on cutaneous disease entertain similar views; amongst whom I may mention the names of Hebra, Simon, Füchs, and Rosenbaum, and the two former especially, from their deserved popularity in Germany, have been able to give a considerable stimulus to the philosophic study of this branch of medicine. In short, the sympathetic connexion between the skin and mucous membrane is so evident, that, as Mr. Bowman observes, it is impossible, in the present state of knowledge, to treat of these

large expansions of mucous membrane, in the interior of the body, apart from the true glands and the skin, which form with them a great system.—B.]

There are no diseases which have been, and are still, so much neglected as diseases of the skin; yet there are none so easily recognised, for their characteristic phenomena are appreciable by the eye, while they are at the same time extremely frequent. Perhaps, however, these two circumstances may account for the confusion which has prevailed in the history of cutaneous affections; here, as in many other branches of medicine, the multitude of facts has merely served to encumber the science, without enriching it; and what other results could we expect, when the different stages of the same affection have been described as diseases essentially different from each other, and the various facts on which the science rests have been collected without order or any view to classification.

A variety of generic terms have been employed by the French pathologists, from time to time, to designate cutaneous diseases: as for instance, Leprosy, Herpetic eruption, Dartre. The term *dartre* (from δαρτός, excoriated) was long a favourite one, and is still vulgarly applied to a certain class of skin diseases; but we are of opinion that it should be rejected, as a term of too uncertain signification to be employed in medical language. In this respect we have followed the example of English writers, who have ceased to employ the terms "scurvy and leprosy," corresponding to our words "dartre and leprosy."

The ancients were acquainted with diseases of the skin, which seem to have been very frequent amongst the Egyptians. The first express mention that we find of them is contained in the book of Leviticus, where Moses commands that all persons affected with *tsaraäth* be separated from the rest of the people; he describes, at the same time, the symptoms by which this disease may be recognised. According to Herodotus, who lived 1000 years after Moses, the laws of the Jews respecting leprosy were derived from the experience of the Egyptians. The Septuagint translation of the Hebrew word צרעת (*tsaraäth*) is λέπρα, which latter, no doubt, was intended to express some severe cutaneous disease. But the symptoms of λέπρα, according to the Greek physicians, are quite different

from those which Moses gives as characteristic of *tsaraäth.* By λέπρα (from λεπρὸς, rough), the Greek writers signified a scaly affection of the skin confined to the surface; while the *tsaraäth* of Moses penetrates even to the bones, a character peculiar to the λεύκη of Greek writers and not to λέπρα. In endeavouring to fix the meaning of the Hebrew word *tsaraäth*, we must refer to the description of the disease to which Moses applies it, for it merely signifies, according to Michaelis, "severe affliction," or, to Eben Esra, "severe disease." The Septuagint, in translating the Hebrew term *tsaraäth* by lepra Hebræorum, committed the same fault as the Arabians afterwards did, who translated *juzam* or *juzamlyk* (a disease analogous to tsaraäth) by *lepra Araborum.* The Septuagint, then, in translating those words into the term λέπρα, intended rather to indicate the existence of some serious disorder than to determine its nature; but, however this may be, the use of the word lepra in the sense adopted by the Septuagint, is now consecrated by time; and in the very outset of the study of cutaneous diseases we have striking example of the confusion produced by the application of the same term to diseases essentially different in their nature. Cutaneous affections were very common amongst the Greeks, and the terms employed by Hippocrates are still in use at the present day, but it is impossible to determine, with any degree of certainty, to what forms of disease the names handed down to us by Hippocrates were applied. We are, however, of opinion that the only way to arrive at any satisfactory result is to seek the primitive signification of the terms in the language in which they were originally found.

Hippocrates speaks of diseases of the skin under the denominations λέπρα, ψώρα, and λειχῆνες, (*Lib.* de Affect. sect. 3; Prænot., et alibi passim). He also employs the terms ἐξανθήματα, ἐρυσίπελας, and πυρός ἄγριος (Lib. 3, Epid). These terms are applied to cutaneous eruptions which accompany very dangerous diseases. The terms λέπρα, ψώρα, are evidently employed by Hippocrates to designate scaly eruptions, and they comprehend all those affections which we describe under the name of lepra, psoriasis, pityriasis, and ichthyosis. We have already shown how the Septuagint applied the word λέπρα to a highly dangerous form of cutaneous disease.

The word *ψώρα* (roughness) seems to have been used by Hippocrates and the Greek writers to designate a variety of eruptions accompanied by itching, and probably also *lichen*, *prurigo*, &c., but there is no proof whatever that they ever applied it to scabies. M. Dezeimeris, in an interesting article on the history of Scabies (*Dic. de Med.*, 2d edit., *Gale*), proves that the Greeks were acquainted with scabies, and, amongst others, cites the following passage from Aristotle, to show that they were aware of its contagious character:—

"Cur a tabe et lippitudine, et scabie (*ψώρα*) capiuntur, qui appropinquarint; ab aqua autem intercute, aut febre, aut stupore attonito, aut aliquo ex numero cæterorum malorum capi nequeunt." —(*Probl.* sect. 7.)

The answer of Aristotle deserves notice:

"Sed scabies (*ψώρα*) magis quam lepra, cæteraque vitia generis ejusdem, afficere potest; quoniam per summa corporis errat, et humore manat glutinoso: genus namque prurientium omne tale est. Itaque idipsum quia per summa oritur glutinosumque est, nimirum idcirco attingere potest: cætera nequeunt, vel quia non per summa proveniunt, vel quia persistere suam ob siccitatem non possunt, quamvis per summam cutem oriantur."—(Aristotle, *Probl.*, sect. vii., *Probl.* 8, t. iv. Ed. de Duval.)

The above passages certainly indicate the contagious nature of the disease which is described, but there is no proof of that disease being scabies; besides we know the value which should be attached to contagion as a character of certain diseases. We cannot attach greater importance to the following passages which M. Dezeimeris quotes from Paulus Æginetus and Actuarius. The former says:

"Uterque affectus (lepra et scabies) cutis aspritudo est cum pruritu, in qua corpus absumitur colliquaturque, originem ex melancholico humore trahens; sed lepra altam cutem orbiculatim depascitur, et piscium modo squamulas ex se remittit; scabies vero summa infestat potius, varie figurata, furfuraceaque remittit." —(Paul. Ægin., lib. iv. cap. ii.)

Actuarius rejects the *furfuracea*, but the following passage is far from being as clear as the one we have cited from Aristotle:

"Minus post elephantem mala est λέπρα, cui scabies et impetigines succedunt: sed lepra altius descendit et orbicularia

exanthemata facit, et carnis quasdam colliquationes, ac λεπίδας (hoc est squamulas) remittit, unde etiam nomen adepta est. Non ita profunde scabies (ψώρα) penetrat, et variis figuris insignitur, nec furfuracea corpuscula rejicit. Lepram melancholicus succus committit; sed scabiem *varii* humores, earumque variæ misulæ constituunt. Communis utrique est cutis asperitas et pruritus." (Actuarius, *Med.*, *sive Method. Medend.*, lib. ii. cap. ii.)

Assuredly these quotations do not prove that their author was acquainted with scabies, while those derived from Plutarch and Lucian refer chiefly to the violent itching which characterises ψώρα, a sensation at first agreeable, but soon ending in torture. Besides, this character is equally applicable to lichen, and still more so to prurigo. Persons afflicted by the latter disease have been driven to suicide as a refuge from the dreadful sensation of itching which sometimes attends it; but in scabies the sensations are never so violent.

Certain Spaniards, it is said, refuse to undergo any treatment for the itch, being unwilling to forego the pleasurable occupation of scratching their backs; had they been afflicted with prurigo, the case would have been far different.

We admit, then, that the disease now termed itch was known to the Greeks; but we think that it was often confounded with other cutaneous affections which are characterised by itching; and we affirm that it was never designated under the term ψώρα. Besides, even amongst the moderns we find the words *gale*, *rogna*, *galio*, *scab*, *itch*, *krätze*, &c., applied not only by the vulgar, but by authors, to diseases attended with itching, but not strictly belonging to scabies.

The Greeks used the term ψώρα, with the adjunct ἑλκώδης (ulcerated), in connexion with cutaneous diseases attended by a discharge of some humour. These, which certain French writers describe under the name of *dartres vives*, embrace several species of skin-diseases, such as lichen agrius, eczema, impetigo, &c. The word ψώρα, with λέπρα joined to it as an adjective (ψώρα λέπρα), indicated affections attended with violent itching, but without discharge; these are termed "dry dartres" by some modern French writers.

Hippocrates frequently mentions certain eruptions, which he groups under the generic name of λειχῆνες, but does not point out their characteristic signs. (*Lib.* 3 *ad Eunap. c.* 57, *et lib.* 5, Κατὰ

τόπους. *Lib.* 2, Προρρητικόν, *et lib.* Περὶ Παθῶν.) Some writers pretend that Hippocrates applied this term to *impetigo;* but the general opinion is, that by it he wished to designate an affection accompanied by desquamation of the epidermis, the farinaceous dartre of Lorry (*psoriasis, pityriasis*). (Lorry, de Morb. Cut., p. 145).

The three classes of skin diseases, comprised under λέπρα, ψώρα, and λειχήν, are, with a few exceptions, only those which were known to Hippocrates, who seems to have considered them as different degrees of one and the same disease, commencing with λειχήν, and terminating in λέπρα.

Hippocrates likewise employed some other terms, which we find in modern books with their primitive signification; we allude to ἐξάνθημα, ἐρυσίπελας, and ἕρπης. The first of these he applied to every form of eruptive disease (*lib.* 3, *Epid.*); the term ἐρυσίπελας he used in the same sense that we now employ it in; but it is not easy to fix a precise meaning to his ἕρπης (from ἕρπειν, to spread). This term appears to have been applied to various cutaneous affections, having, however, the common character of marking irregular figures on the skin. The order herpes, in the modern classification, presents the same character; for example, herpes iris, herpes circinnatus, and zona. Some varieties of lichen, eczema, impetigo, and lepra are marked by the same characteristic. Lorry thinks that the Greek word ἕρπης, is synonymous with the French term *dartre*, and indicated a slight cutaneous affection, which spreads over the surface of the skin, without leaving any mark behind it. Paulus Æginetus admits two varieties of ἕρπης, a miliary (κεγχρίας), and an ulcerative (ἐσθιόμενος), and Galen adds a third, herpes vesiculosus (ἕρπης φλυκταινώδης). Some writers, Frank and Sauvages for example, retain the term herpes, and apply it as a generic name to skin-diseases in general; indeed, Frank gives a preference to the classification of Galen above all others; Galen, as we have mentioned, divided herpes into three varieties, the miliary, the vesicular, and the ulcerative.

Hippocrates makes no mention of porrigo, but under the term πιτυρώδης he speaks of certain eruptions which appear about the head towards the end of some acute diseases. (*Epid.* 2.)

The word ἐκθύμα (from ἐκθύειν to burst forth,) seems to

have been used by Hippocrates to indicate pustular eruptions, and those that were elevated above the surface of the skin. Hence Fernel, Paré, Vidus Vidius, and some other writers, pretend that Hippocrates applied this term to variola, and restricted the ἐξανθήματα to scarlatina and measles. We are of a different opinion; nor can we believe that the founder of medicine ever confounded so remarkable a disease as small-pox with other cutaneous disorders. Hippocrates likewise speaks of pustules under the terms φλύκταιναι, ὕδωρα and πομφοί; but the word pustule (*pustula*) is used by Celsus to indicate, not only every kind of elevation containing a fluid, but even those "quæ ex urticâ vel ex sudore nascuntur."

Under the term ἔκζεμα, (ἐκζεῖν, to burst forth,) Ætius speaks of certain eruptions, attended by heat and pain, which cover nearly the whole of the body (Tetrab. iv. Serm. 1, c. 128), "eas ἐκζέματα, ab ebulliente fervore, Græci vulgo appellant." Paulus Æginetus gives the same name, and likewise the appellation περιβέσματα to the eruption of dry pustules (*citra saniem*) *i. e.*, to papulæ. It is not easy to identify the ἐκζέματα with any of the diseases described by Celsus; he probably confounds them with the papulæ and pustulæ. Hippocrates applies the terms ἀλφός, μέλας and λευκὴ to all cutaneous affections characterized by a change of colour and diminution of sensibility in the skin, with loss of hair, which becomes white.

The two first differed only in colour; λεύκη was an extremely severe disease, which gradually destroyed the skin and muscles and penetrated to the bones; it seems to have been the same malady as the *tsaraäth* of the Jews. The following fragment of Archigenes, handed down to us by Ætius, indicates the points of connexion which the Greek writers laid down between the λεύκη of Hippocrates and the scaly diseases comprehended by them under the generic term λεπραῖ.

"Differt lepra a leuce et alpho, vitiliginis speciebus, in eo quod lepra aspera sit ad contactum, et pruritum locorum inducat; cutis enim sola est quæ affecta est, et excoriatâ cute, caro subjecta sana reperitur. In leuce vera subjecta cuti caro tota per profundum transmutata est ad albidiorem colorem et superficies affecti loci lævissima est, et confricta citius rubescit, præsertim in iis qui facile curantur. At vero alphos in superficie hæret et veluti squamma

cuti affixus est. Cæterum a scabie differt lepra, quod in scabie quidem furfuracea quædam cuti inhærentia apparent, in lepra vero quædam veluti magnorum piscium squammæ. Differt vero lepra ab impetigine feroci, eo quod impetigo orbiculatim semper proserpat, lepra vero non ita, nec eodem modo." (Tetrab. iv. Serm. 1. cap. 134.) Nevertheless Paulus Æginetus, who describes λέπρα and ψωρίασις together, points out the circular form of λέπρα as a distinct character of that affection. "Λέπρα per profunditatem corporum cutem depascitur *orbiculatiore modo*, et squammas piscium squammis similes dimittit: ψώρα autem magis in superficie hæret et *varie figurata* est, &c." (Paulus Æginetus, lib. iv. cap. 1, *De Lepra et Psora.*)

The more immediate successors of Hippocrates added little to our knowledge of cutaneous diseases; indeed, generally speaking, their commentaries were rather calculated to confuse than throw light upon the subject.

From Celsus, who lived during the reign of the emperor Tiberius, we are enabled to obtain some idea of the knowledge which the Romans possessed with respect to diseases of the skin. In his writings, in addition to the Greek terms already noticed, we find several new ones, such as *impetigo, papulæ, pustulæ, scabies, porrigo, sycosis, vitiligo,* &c.

The term impetigo (from *impetus*) was introduced by Pliny, who always employs it in the plural number, (*impetigines,*) to signify eruptions which are chiefly seated in the face. Celsus divides impetigo into four species; the first is pustular, and terminates in ulcerations; the second, which he denominates *rubra*, is papular, and attended with vivid injection of the skin; the third is *black*, and much more severe than the two preceding forms; the fourth species is incurable, and seems to correspond with the *psoriasis inveterata* of our modern classifications.

The term *papulæ* (from *papula*, a little bud) was first employed by Cœlius Aurelianus (Tarb. 21), who says, while speaking of rubefacients, "admovenda illa emplastra quæ corpus valeant papulare." Virgil likewise employs the same word "ardentes papulas," (Georg. lib. 3.) Celsus describes two species of papulæ.

"Altera est in qua per minimas pustulas cutis exasperatur et

rubet, leviterque roditur, &c.; altera autem est quam ἀγρίαν, id est feram, Græci appellant."

He does not endeavour to draw a distinction between papulæ and pustulæ, although when speaking of the latter he mentions the fluid which they contain, while he makes no allusion to a fluid in connexion with the papulæ. Celsus describes three species of pustules; the first he compares to the disease called ἐξανθήματα by the Greeks, or φλύκταιναι ἑλκώδεις when the pustules gave way and became ulcers; the second species comprises the φλυζάκιον of the Greeks: and the third or most dangerous form is the one denominated ἐπινυκτίς. (Cels. lib. v. sec. 14.)

Celsus divides *favi* (μελικηρία of the Greeks) into two species, which merely differ in the size of the pustules; the disease generally attacks the scalp. (Cels. lib. v.) By the term *achores*, Celsus designates a species of pustule occupying the same situation, (Cels. lib. v. c. 18;) they differ from the *achores* only in being somewhat smaller.

Hence, according to the description of Celsus, the two species of pustules, *favi* and achores, merely differ in size and the nature of their contained fluid. The word *favi* was, in all probability, employed to designate the affection which we have described under the name of porrigo (*tinea favosa*), and Biett is of the same opinion. Celsus applies the term *porrigo* to various cutaneous diseases of the scalp, either with or without suppuration.

"Porrigo est, ubi inter pilos quædam quasi squammulæ surgunt, eæque in cute resolvuntur et interdum madunt, multo sæpius siccæ sunt, idque evenit, modo sine ulcere, modo exulcerato loco." (Celsus, lib. vi. cap. 1, 2.) "Subsequent writers have described the same disease under the various names of *pityriasis capitis, scabies capitis, crusta lactea, tinea, alopecia*, &c., &c."

It is generally admitted that the *scabies* of Celsus and other Latin writers is identical with our itch; but the short description of Celsus is equally applicable to other cutaneous diseases, to say nothing of his having omitted to mention contagion.

"Scabies vero est durior cutis, rubicunda, ex quâ pustulæ oriuntur, quædam humidiores, quædam sicciores, exit ex quibusdam sanies, fitque ex his continuatis exulceratio pruriens, serpitque in

quibusdam cito. Atque in aliis quidem ex toto desinit, in aliis vero certo tempore anni revertitur. Quo asperior est, quoque prurit magis, eo difficilius tollitur: itaque eam quæ talis est *ἀγρίαν* (id est feram) Græci appellant."

The above passage is rather obscure; and if we admit that Celsus was really acquainted with *scabies* such as it now is, we must acknowledge that his description is far from possessing that accuracy and precision which characterise his writings. The passages which Dezeimeris has cited from Latin non-medical authors, prove that *scabies* was a disease both widely spread amongst and well known to the Romans. Quintus Curtius briefly notices this affection, its nature, and mode of treatment. "Scabies corpora invasit et contagium morbi etiam in alios vulgatum. Oleum remedium fuit." (Hist. lib. ix. cap. 10.)

Hence we believe that the itch was known to the Romans, but they had not separated it, as modern writers have, from all other diseases of the skin.

Sycosis seems to have been a very severe affection, at least during the time of Pliny, who says that it was brought from Asia by a Roman knight, and thence communicated to several of the inhabitants of Rome. Through the Roman custom of salutation (kissing,) it quickly spread over a great part of the population. Celsus describes it in the following terms:

"Est etiam ulcus, quod a fici similitudine *σύκωσις* (from *σῦκον*, a fig) a Græcis nominatur. Caro excrescit, et id quidem generale, est. Sub eo vero duæ species sunt. Alterum ulcus durum et rotundum est: alterum humidum et inæquale. Ex duro exiguum quiddam et glutinosum exit: ex humido plus, et mali odoris. Fit utrumque in iis partibus quæ pilis conteguntur, sed id quidem quod callosum et rotundum est maxime in barba, id vero quod humidum præcipue in capillo." (Celsus, lib. vi. cap. 1, 3.)

Under the head of *vari*, Celsus mentions certain cutaneous affections of the face, which he considers as unworthy the attention of the medical man. Ætius speaks of them under the names of *ἀκμή* or *ἀκνή*, (maturity, vigour,) and of *ἴονθος*, (root of the hair). The pustular diseases comprised under the term *vari* appear to have received the latter names from the idea that they were de-

veloped at the age of puberty, or period when the beard commences to grow.

Celsus classes elephantiasis amongst the constitutional disorders, and speaks very briefly of it; (lib. iii. cap. 23.)

"Ignotus autem pæne in Italia, frequentissimus in quibusdam regionibus, is morbus est quem *ἐλεφαντίασιν* Græci vocant; eoque longius annumeratur, quo totum corpus afficitur, ita ut ossa quoque vitiari dicantur. Summa pars corporis crebras maculas crebrosque tumores habet: rubor earum paulatim in atrum colorem convertitur. Summa cutis, inæqualiter crassa, tenuis, dura mollisque, quasi squammis quibusdam exasperatur; corpus emacescit; os, suræ, pedes intumescunt. Ubi vetus morbus est, et digiti in manibus pedibusque sub tumore conduntur, febricula oritur; quæ facile tot malis obrutum hominem consumit."

Let us now compare this description with that which the same author gives of *leuce* and *alphos*, known to the Romans under the name of *vitiligo.*

"Vitiligo quoque, quamvis per se nullum periculum affert, tamen et fœda est, et ex malo corporis habitu fit. Ejus tres species sunt. Ἀλφός vocatur, ubi color albus est, fere subasper, et non continuus, ut quædam quasi guttæ dispersæ esse videantur. Interdum etiam latius et cum quibusdam intermissionibus serpit. Μέλας colore ab hoc differt, quia niger est, et umbræ similis: cætera eadem sunt. Λευκή habet quiddam simile alpho, sed magis albida est, et altius descendit, in eaque albi pili sunt et lanugini similes. Omnia hæc serpunt, sed in aliis celerius, in aliis tardius. Alphos et Melas, in quibusdam, variis temporibus et oriuntur et desinunt; leuce quem occupavit non facile demittit." (Lib. v. cap. 23.)

From the quotations which we have just made, it is clear that Celsus arranged elephantiasis and vitiligo under different classes; but his description of the former disease is very brief, and he was, evidently, unacquainted with it. Lucretius (de Rer. Natur. lib. 5,) likewise speaks of elephantiasis as a disease peculiar to Egypt, and unknown in Italy.

"Est Elephas morbus qui propter flumina Nili
Gignitur Ægypti in medio, neque præterea usquam."

Galen, who wrote at a period when the stern virtue of ancient

Rome had given place to the most abandoned licentiousness, describes elephantiasis as a malady unknown in Italy, but he seems to have confounded the elephantiasis of the Greeks with the vitiligo of the Romans ; (de Simpl. Med. Facult. xi.), and regards both as easily curable. It seems certain, then, that the elephantiasis mentioned by Celsus, Lucretius, and Galen were unknown to these writers, or at least that they had never observed it themselves.

We find no satisfactory description of elephantiasis before the time of Areteus, who calls it the Herculean disease, because it exceeds all others in violence, and is generally beyond the reach of art. It is termed, (he says,) *elephantiasis* because the skin is covered with scales like those of an elephant. Some writers designate it *leontiasis*, from the dreadful disfiguration of the countenance by which it is sometimes accompanied; or *satyriasis*, from the violent excitement of the organs of generation, by which some of its victims are tormented.

In addition to the description which Areteus gives of this dreadful disease, Archigenes describes the hoarse and hollow voice mentioned as a pathognomonic symptom by writers of a more recent date. It is, however, difficult to identify the elephantiasis of Areteus, Archigenes, and Paulus Æginetus with any of the cutaneous affections mentioned by Hippocrates. Under the term *leuke* he probably comprised two varieties—one consisting in simple discoloration of the skin (*vitiligo*,)—the other analogous to the disease which was afterwards better known under the name of elephantiasis.

The disease described by Areteus, Archigenes, Paulus Æginetus, and other Greek writers under this latter name, was well known to the Arabians, who denominate it *juzam*, *juzamlyk*, *judam*, *judamlyk*, *baras*, and *bothor*. In works translated from the Arabians we find these terms rendered by the word lepra; hence, the lepra of the Arabians is the same disease as the elephantiasis of the Greeks and the lepra of the Jews. The disease, indeed, seems to have been endemic in Judea, whence our ancestors brought it into Europe during the middle ages. We conclude that the terms *leuke*, *alphos*, *vitiligo*, *juzam*, *juzamlyk*, *judam*, *judamlyk*, *baras*, *albaras*, *bothor*, *elephantiasis Græcorum*, *lepra Arabum*, *lepra Hebræorum*, and lepra of the middle ages were frequently employed to designate

one and the same disease, which infected Europe after the return of the Crusaders. At the same time, we must confess that many of these terms were also applied to complaints essentially different from each other in nature, and have merely the common character of being highly dangerous. For a long period of time the name of lepra was given to many dangerous diseases of the skin, and this explains the extraordinary frequency of the disease during the 8th century, when the number of persons affected with it in France amounted to two thousand; but of these few had true lepra or elephantiasis.

We have just said that the *juzam* of the Arabians was the same complaint as the elephantiasis of the Greeks, (Areteus, Archigenes, and Paulus Æginetus). But the Arabians were acquainted with another disease which they denominated elephantiasis, from the enormous size of the patient's legs; this is the malady known in France as the "Barbadoes leg," and on which M. Allard published an excellent memoir in the year 1816. The Arabic name of the disease was *dal fil*, *i. e.* the elephant disease, and sometimes they called it simply *fil*, (elephant). The translators rendered this term by *elephantiasis Arabum*, while they translated into *lepra Arabum* the term *juzam*, which really signified the elephantiasis of the Greeks.

According to Winterbottom (account of the native Africans in Sierra Leone, vol. ii., c. 4.) the foolahs, or native inhabitants of the coast, still apply the Arabic name to this latter disease, which they divide into three species, or rather degrees: 1st. *damadyang*, or leuce, when large portions of the skin become discolored, and lose their sensibility; 2nd. *didyam*, or sghigam, douddam, and juzam, when the toes or fingers are separated at their joints, and the swelling of the nostrils renders the face hideous; 3rd. *baras*, when the disease had acquired its severest form, and the voice become hoarse and hollow.

Robinson, who appears to have seen these complaints frequently in India, considers the leuce, or lepra, as being distinct from the tuberculous lepra, or elephantiasis of the Greeks. "The *baras*, or white lepra (Trans. of Med. Chir. Society, t. x.) commences by spots of various sizes, with discoloration of the skin, and loss of sensibility. The spots extend gradually, and many spread over the whole body; the patients become extremely listless and depressed;

all the functions are low, large fissures appear, and are succeeded by ulcers; the fingers and toes fall off, and finally the extremities; and the patient, at length, sinks under the disease." "Sometimes, (says Mr. Robinson,) the complaint is complicated with tubercular lepra, or the elephantiasis of the Greeks, but we cannot regard the latter as a form or continuation of the *baras*."

In the preceding pages we have endeavoured to give some idea of the cutaneous pathology of the ancients, also the origin of most of the terms which have been handed down, and are still in use. Amongst the crowd of authors who have written upon diseases of the skin, we have only cited a few of those who appear the most trustworthy, and yet what a number of contradictions their writings contain? Each author adopts a particular classification, and the same names are employed indiscriminately to designate diseases essentially different from each other.

Want of classification in the first instance, and at a later period imperfect classifications, have greatly contributed to envelope in obscurity the history of cutaneous affections; still, between the end of the sixteenth and the commencement of the nineteenth century, several writers have endeavoured to reduce the study of these diseases to some order, and, by grouping together the different forms, have succeeded in throwing much light on this important branch of pathology.

The various classifications may be reduced to three. The first was introduced by Mercurialis, (De Morb. Cut., 1576,) adopted by Turner, (Traité des Mal. de la Peau, 1743,) again brought forward in 1806 by Alibert. The basis of this classification is the seat of the disease; two principal groups being admitted for the head and the rest of the body. The treatise of Mercurialis is divided into two parts; the first is composed of a chapter on general considerations, and of ten others devoted to affections of the head. The second part, which commences thus, "*post vitia capitis sequuntur vitia totius corporis*," contains six chapters. Turner only partially adopted the method of Mercurialis; after a general description of cutaneous diseases, he devotes the second part of his work to those affections which are confined to particular parts of the body. Alibert adopted the same method, and called cutaneous affections of the head *teignes*, while he denominated

dartres those which attacked other parts of the body; he added, however, several species and varieties, founded on the form of the eruption, product of the inflammation, &c. Thus, when the eruption was attended with a scaly desquamation, he classed it under the *dartre squammeuse*, and then added the terms *humid*, *orbicular*, &c., according as it was accompanied by discharge, or presented a circular appearance. Whenever the disease was attended with scabs, he ranged it under a genus which he denominated *dartre crustacée*. Alibert likewise made a great number of sections under which he placed certain diseases that did not admit of being classed with the rest. Thus, besides his five species of *teignes*, and seven species of *dartres*, Alibert described *ephelides*, *pliques cancroides*, *lèpres*, *pians*, *ichthyoses*, *syphilides*, *scrofules*, and *psorides*. This plan was much too vast a one, and cannot be followed as a useful guide in the study of cutaneous diseases.

In the first place the method of Alibert is subject to the objection already advanced against the classifications of Mercurialis and Turner, viz. that of separating from each other diseases which are identical merely because they are situate in different parts of the body. Again, in arranging his species according to the products of inflammation, he has brought together affections which have little analogy, and separated some which are closely allied. For example, under the genus *dartre squammeuse*, we have inflammatory eruptions essentially different in their elementary characters, march, symptoms, and mode of treatment. How can we have a correct idea of the *dartre squammeuse lichenoïde* and the *dartre squammeuse humide*, while we arrange them under the same order and clothe them with the same characters? The *dartre squammeuse humide*, if taken by itself, merely represents a certain period of an inflammatory cutaneous affection, the elementary characters of which may have been various, and which may have terminated in diseases essentially necessary to be distinguished from each other. On the other hand, Alibert describes, under different species, several affections which are identical; thus, the *dartre furfuracée arrondie* and the *dartre squammeuse lichenoïde* possess the same elementary characters, follow the same course, require the same treatment; in a word, merely differ in the form of the spots, the one being, at the very utmost, but a variety of the other.

These deficiencies could not fail to strike Alibert, who abandoned his method for another, which, so far from being an improvement, has no claim whatever to the title of "classification." In his *arbre des dermatoses* we find no trace of method or arrangement; branches shoot forth at the will of the writer, and nothing more.

[Although the classifications of Mercurialis and Turner cannot be defended on strictly anatomical grounds, and have no pretension to perfect and lasting systems, still an arrangement of diseases of the skin, according to the regions in which they are most commonly developed, is of undoubted utility in a practical point of view. Take for example the *exposed surfaces:* as the face, the neck, the head, and hands. Although most of the diseases to which the skin is liable may appear on any part of the body, there are unquestionably certain eruptions which show a predilection for certain regions, and the character of the disease will vary, often so as to give an idea of a totally different complaint, according to the region in which it is developed. We know, for example, that itch never attacks the face, nor lupus the hands, and that eczema, or impetigo, have a very different appearance on the head to that which they present when developed on parts not covered by hair: modification in the structure of the skin of the different parts will cause these variations. Again, we find several eruptions almost confined to the face, as lupus, acne, sycosis. The two former appear in nine cases out of ten upon the face, and the latter is altogether peculiar to that region. Thus, instead of wading through a mass of print, the busy practitioner, who may have little time for elaborate research, will find, grouped together, within a small compass, those diseases which he is constantly liable to meet in practice; and he may at a glance ascertain the nature and treatment of any given eruption of the particular group referred to; and so with the diseases of other regions. Impressed with the truth of these views, I wrote a practical treatise on the "Regional Pathology of the Skin,"* and the very favourable reception which the work

* "Eruptions of the Face, Head, and Hands:" with the latest improvements in the Treatment of Cutaneous Diseases. (Illustrated with coloured Plates.) By T. H. Burgess, M.D., &c. London. 1850.

received from the profession, has proved that the impressions under which it was written were not erroneous, and that such a book was a desideratum.—B.]

The next classification which we have to notice, is that of Plenck, (1789,) which was subsequently improved in so happy a manner by Willan. Plenck was the first who rejected all topographical descriptions, and arranged cutaneous diseases according to their external characters. Still he committed the error of mixing up the products of inflammation with the true anatomical characters of the disease. Thus, beside vesicles, pustules, &c., we have species based upon the existence of incrustations, ulcers, &c., as if the latter were not a mere consequence of the former, and as if it were a trifling error to divide one and the same disease into two or three different affections, according as it presented itself with pustules, scabs, or ulcers.

Willan adopted the basis of Plenck's method, and on it established a classification which in the present state of our knowledge cannot be surpassed in clearness and precision. He rejected all the products of inflammation, and took the characters of his orders from the elementary lesions of the skin, which he divided into eight orders. The order *squamæ*, it is true, is founded rather on a product of inflammation than on elementary lesions, but its characters are well marked, and belong exclusively to the diseases which are placed under it.

Willan's classification, taken on the whole, is a most perfect one; for the errors of arrangement which he committed were not the results of his method, but errors in its application. Thus he places purpura among the *exanthemata;* erysipelas with the *bullæ;* scabies among the *pustulæ;* acne, sycosis, among the *tubercula.* Independently of these faults, however, we find certain others which are not so easily got over. For example, we have variola and tinea arranged under the same order, although they present a very wide difference in their nature and progress. Besides, it is by no means easy to apply artificial distinctions to disease; there is but a slight difference between a vesicle and a pustule; the bulla of *rupia* often bears a close resemblance to the phlyzaceous pustule of *ecthyma.* Finally, there are several cutaneous diseases which cannot be arranged under any of Willan's eight orders; *purpura,*

for example, bears as little affinity to the exanthemata as it does to the vesiculæ or squamæ: and lupus is not always a *tubercular* affection. Notwithstanding these imperfections, the classification of Willan is clear and precise, because it is based on the elementary characters of the disease, which are invariable, and may be detected at every stage of the affection. The third method, or that of Joseph Frank, (1821), would be a most attractive one, if it were applicable to the study of diseases of the skin. Following the example of Retz (1790) and Derien (1804), Frank divides cutaneous affections into acute and chronic. At first sight, this seems a very natural division, but a little reflection shows that it is totally impracticable; in fact, how can we divide a work into two parts, in one of which is found the history of a disease during its acute stage, and in the other the history of the same malady during its chronic stage, unless, indeed, we admit with Frank that a given disease is always acute or chronic. This may be true for a certain number, but certainly not for the majority; and hence the distinctions laid down by Frank cannot form the basis of a general classification.

Such are the three principal methods of classification that have been applied to cutaneous diseases. None of them, as we have seen, are completely above reproach, but their imperfections are intimately connected with the nature of the subject to which they are applied. The signs of cutaneous disease are, it is true, appreciable by the sight; but we are not yet sufficiently acquainted with the structure of the tissues in which they are seated, to lay down precise and lasting distinctions. It seems clear that a perfect classification of cutaneous diseases should be founded on the special seat of each elementary lesion, but we can never arrive at this degree of perfection until our knowledge of the intimate structure of the skin is more advanced than at present.

Of the methods just mentioned we have adopted that of Willan, which possesses the greatest claim to our attention; at the same time we have availed ourselves of the numerous and important modifications introduced by Biett. We have classed cutaneous diseases, as will be seen in the following table, according to their elementary characters, arranging under distinct heads some which we were unable to comprise under the eight principal orders.

BIETT'S CLASSIFICATION.

ORDER I. *Exanthemata.*—Erythema; erysipelas; roseola; rubeola; scarlatina; urticaria.

ORDER II. *Vesiculæ.*—Miliaria; varicella; eczema; herpes; scabies.

ORDER III. *Bullæ.*—Pemphigus; rupia; [Button Scurvy.]

ORDER IV. *Pustulæ.*—Variola; vaccinia; ecthyma; impetigo; acne; mentagra; porrigo; Equinia or Glanders.

ORDER V. *Papulæ.*—Lichen; prurigo.

ORDER VI. *Squamæ.*—Lepra; psoriasis; pityriasis; ichthyosis.

ORDER VII. *Tubercula.*—Elephantiasis Græcorum; molluscum; frambœsia.

ORDER VIII. *Maculæ.*—Colorationes. Fuscedo cutis; ephelides; nævi.—Decolorationes. Albinismus; vitiligo.

ADDITIONAL ORDERS.

ORDER IX. Lupus.
ORDER X. Pellagra.
ORDER XI. Malum Alepporum.
ORDER XII. Syphilida.
ORDER XIII. Purpura.
ORDER XIV. Elephantiasis Arabicum.
ORDER XV. Cheloidea.

From the preceding table it may be seen, that cutaneous disorders are capable of being reduced to a certain number of elementary lesions, which exist constantly, in all eruptions classed under each order, and may be discovered at all periods of the disease if we search for them attentively. Each elementary lesion has its special character; each possesses, as a symptom, its peculiar value.

EXANTHEMATA.—This term is applied to patches of a reddish colour, varying in intensity, size, and form, disappearing under pressure of the finger, and terminating in delitescence, resolution, or desquamation.

VESICULÆ.—A vesicle is a slight elevation of the epidermis, containing a serous and transparent fluid, which, however, is occasionally opaque or sero-purulent. The vesicle may terminate in

absorption of the fluid, slight desquamation, excoriation, or the formation of small, thin incrustations.

Bullæ.—Generally speaking, bullæ differ from vesiculæ merely in size; they are small superficial tumours, caused by effusion of serum underneath the epidermis.

Pustulæ.—This term should be strictly confined to circumscribed collections of pus on the surface of an inflamed mucous membrane. The contents of the pustules, in drying, produce scabs, and they may be followed by chronic induration, inflamed surfaces, or sometimes by slight excoriation.

Papulæ.—These are small elevations, which are solid, resisting, and never contain any trace of fluid; they may, likewise, give rise to ulceration, but generally terminate in resolution or furfuraceous desquamation.

Squamæ.—The term squamæ is applied to the scales of thickened, dry, whitish, friable, and degenerated epidermis, which cover minute papular elevations of the skin; they are easily detached, and may be reproduced for an infinite length of time by successive desquamations.

Tubercula.—These are small hard tumours, more or less prominent, circumscribed in form, and persistent; they may become ulcerated at the summit or suppurate partially. In this definition we consider tubercles as elementary lesions, and not those which appear after abscesses.

Maculæ are permanent changes of colour in certain points of the skin, or in the whole of the cutaneous envelope, but unattended by any general derangement of the health.

Under these eight orders we have arranged the great majority of cutaneous diseases; we have, however, made a few changes in the classification of the species. Thus, in our opinion, *pemphigus and pompholix* constitute one and the same disease; *acne* is clearly not a tubercular affection, so we have placed it under the pustulæ, to which it really belongs. *Erysipelas* is an exanthematous disease, and *scabies* a vesicular one; we have, therefore, transposed them to their respective orders; the diseases arranged under the last seven orders do not admit of being classed with any of the rest, and hence we have thought it right to consider them apart. We have designedly omitted *anthrax*, *burns*, *cyanosis*, and several other affec-

tions which are quite foreign to our subject. The plan of this work did not admit of their being described; and we should, at all events, have been unwilling to encumber it with an account of diseases which, as they are seated in the subcutaneous cellular tissue, are as little adapted for a complete treatise as for a Manual of cutaneous diseases.

Cazenave's Classification.

[M. Cazenave published in his Lectures, in 1841, the following "attempt," as he modestly calls his classification, or Natural System. He does not put it forth as definitive and complete, for, as he justly remarks, it is impossible to form an enduring classification in the present progressive state of anatomical science :—

First Group.

INFLAMMATORY DISEASES.

Order I. Non-specific Eruptions, which may assume an acute or chronic character:
Erythema, Erysipelas, Urticaria, Strophulus, Herpes, Eczema, Pemphigus, Impetigo, Ecthyma, Sycosis.

Order II. Non-specific Eruptions which always assume a chronic character:
Rupia, Lepra, Psoriasis, Pityriasis, Pellagra.

Order III. Acute Specific Eruptions:
Roseola, Rubeola, Scarlatina, Variola, Vaccinia, Varicella, Miliaria.

Order IV. Chronic Specific Eruptions:
Syphilides.

Second Group.

DISEASES OF THE SECRETORY APPARATUS.

Order I. Lesions of the Follicular Secretion:
Acne, Porrigo Favosa.

Order II. Lesions of the Epidermis:
Icthyosis, Horny productions.

Order III. Lesions of the Colouring Matter:
Loss of colour; Albinismus; Vitiligo. *Changes of colour;* Slate-coloured skin; Ephilides; Nævi.

Third Group.

HYPERTROPHIC DISEASES.

Abnormal development of the diseased parts:
Elephantiasis Arabum, Molluscum, Frambœsia, Veruca.
Nævi Vascularis.

Fourth Group.

DESTRUCTIVE DISEASES.

Destructive tendency in the parts affected:
Elephantiasis Græcorum, Aleppo Evil, Cheloidea, Lupus, Cancer.

Fifth Group.

HÆMORRHAGIC DISEASES.

Tendency of the blood to exude from the vessels of the skin:
Hæmorrhagic diseases, properly so called:
Purpura. Melanosis (?)

Sixth Group.

EXALTED SENSIBILITY OF THE SKIN.

General or local Hyperthesia.
Lichen. Prurigo. Anesthesia.

Seventh Group.

FOREIGN BODIES.

Acarus. Pediculus. Pulex.

Eighth Group.

DISEASES OF THE HAIR.

Alopecia. Canitia. Plica.

DISEASES OF THE NAILS.

Onyxia.]

The characteristic symptoms of diseases of the skin may be mixed up together, and we often find many different elementary lesions co-existing, especially in acute cases. They are often attended by general symptoms, particularly those of more or less severe irrita-

tion of the air-passages and intestinal canal. But many cutaneous diseases are chronic, and last for months or years without exciting any derangement whatever of the general health. The colour of cutaneous eruptions and their termination may be considerably modified by the age or constitution of the patient, the co-existence of internal inflammation, and several other circumstances connected with the health of the individual. Thus the accession of some febrile disorder often has the effect of mitigating or even dispersing altogether a chronic disease of the skin which may have existed for months; but when the febrile symptoms disappear, the cutaneous affection returns. In cases of this kind it is said "that the eruption has gone in—has fallen on some internal organ;" but the inflammation of the internal parts has existed long before the disappearance of the cutaneous disease, and the latter returns slowly—long after the complete restoration of the internal parts to a state of health. Without meaning to decide the question of retrocession, at least for diseases of the skin, we may affirm that things occur in the way which we have just mentioned, and that the examples of true retrocession are rare.

Causes.—The causes of cutaneous disease are very diversified, and at the same time involved in considerable obscurity. They occur at all ages, and spare neither sex. Some forms, however, as the various species of porrigo, the variety of impetigo called *crusta lactea*, and the exanthemata, are almost peculiar to children, while acne prevails more at the period of puberty. Generally speaking, diseases of the skin are more frequent amongst young and adult persons than during old age. The lymphatic temperament is a predisposing cause of cutaneous disease. The influence of profession or trade is sometimes very remarkable; thus workmen who handle acrid substances, or are compelled to expose their hands frequently to intense heat, are very subject to different cutaneous diseases of these parts.

Hereditary tendency is a predisposing cause of much importance; nothing is more common than to find parents and children subject at the same time to diseases of the skin. But it by no means follows that the same disease must be handed down from father to child: thus the parent may have had a scaly affection of the skin, and the children be attacked by a pustular or vesicular one; but sometimes, as in the case of *ichthyosis*, the disease is identically the same in

both generations. Amongst the most powerful of individual predisposing causes is that peculiar idiosyncrasy, under which certain persons are attacked by diseases of the skin from causes of apparently the most trivial nature: indeed, in many persons of this class we are unable to trace any probable cause whatever. The great extent of the skin, and number of capillary vessels and nerves distributed to it, point out the intimate sympathy which exists between the skin and the internal organs, and explain how readily functional or organic diseases of the viscera affect the tegumentary system. [In the last edition, M. Cazenave refers to this resemblance in form in hereditary diseases of the skin, in more positive terms, and mentions ichthyosis as the most remarkable instance.]

The trades which seem to predispose most readily to cutaneous diseases are those which give rise to constant excitement of the skin; hence masons, workmen, farriers, &c., are very subject to these disorders. The influence of trade is particularly marked in causing relapse, and especially when the skin is exposed to the action of heat or acrid substances. But there is no relation between the cleanliness of a trade and its tendency to guarantee the workman from diseases of the skin, or *vice versâ*. Thus, nightmen, scavengers, coalheavers, &c., are not peculiarly subject to cutaneous affections, while the exercise of a trade which requires cleanliness and repose is far from acting as a preservative.

Season has likewise a well-marked influence on the development of diseases of the skin, which are much more frequent during spring, than at any other period of the year. The same remark applies to climate. Cutaneous affections are much more severe in warm than in temperate climates. In Greece, Palestine, Egypt, and India, they present appearances, and assume a degree of severity, unknown in the climates of the north. Constant heat and moisture of the atmosphere, also promote the existence of many cutaneous diseases. The parts of Europe in which skin diseases most abound are Britanny, Picardy, Flanders, Holland, Lombardy, certain districts in England and Scotland, the borders of Holstein and Norway; and the Crimea. They are most common in capital or large towns, and chiefly prevail in the dirty and ill-ventilated districts of crowded cities. The influence of light, in the production of some cutaneous disorders, is well known. During spring, the

rays of the sun instantaneously produce freckles. Larrey mentions a case in which indelible spots were produced by the action of the electric spark. In a word, the influence of heat, light, and electricity, is greater, and deserves much more attention than has been generally bestowed upon it.

ACTION OF WARM CLIMATES ON THE SKIN.

[The important influence which *temperature* exerts over the vital functions of the animal economy, is a leading point to be taken into consideration, while contemplating the sanative effects of climate. The faculty of enabling and enforcing one organ to perform the function of another, for the purpose of carrying on life, is not the least wonderful of the effects of heat upon the human system. Thus, for example, in cold and temperate climates the functions of the lungs and kidneys are extremely prominent, and those of the skin and liver less so. But in warm climates the *skin* assumes a more extensive function, and by its activity compensates for the diminished action of the lungs, liver, and kidneys, observable in those regions. The eliminating, or depurating action on the blood, being performed by different sets of organs in both instances.

In cold climates, the lungs and kidneys are the chief agents in this process; in warm countries, the skin and intestinal mucous membrane. In the transition from a warm to a cold climate, or *vice versâ*, the future health of the individual will mainly depend on the facility for the transposition of functions from one organ to another, which his constitution possesses. If, from some peculiarity of constitution, or from being placed in unfavourable circumstances, the different organs of the body are not prepared to act in concert with the new medium by which it is surrounded, and the system is unable to adapt itself immediately to the sudden change from one extreme to the other, the original disease will be aggravated, or a new one generated. Thus, for example, when an inhabitant of these islands migrates to a warm country, considerable vascular and nervous excitement of the system is an almost immediate result, as the initiatory movement in the process of acclimatization. The functions of the lungs and kidneys become diminished, and those of the skin and liver greatly increased. As pulmonary exhalation, or perspiration by evaporation from the lungs, is now

greatly impeded, the effete elements of the blood, usually thrown off by the respiratory organs, must seek another vent, and nature at once sets about converting the *skin* into a compensating depurating agent. And here an important fact presents itself for consideration. I allude to the difference in the organization of the skin in the natives of the temperate zone, and in those of intertropical countries. In warm climates the diminished perspiration by evaporation is compensated for by increased transudation, or sweat, and accordingly we find that nature modifies the organization and functions of the skin to meet that end.

This modification of function and its results upon the economy are well put by Dr. Copland, in the following words: "The *skin* of the dark races is not only different in colour, but it is also considerably modified in texture, so as to enable it to perform a greater extent of function than the more delicately formed skin of the white variety of the species. The thick and dark *rete mucosum* of the former, is evidently better suited to the warm, moist, and miasmal climates of the tropics, than that with which the latter variety is provided.

"The skin of the Negro is a much more active organ of depuration than that of the white. It not only exhales a larger portion of aqueous fluid and carbonic acid from the blood, but it also elaborates a more unctuous secretion, which, by its abundance and sensible properties, evidently possesses a very considerable influence in counteracting the heating effects of the sun's rays upon the body, and in carrying off the superabundant caloric. Whilst the active functions of the skin, aided by the colour, thus tend to diminish the heat of the body, and to prevent its excessive increase by the temperature of the climate: those materials that require removal from the blood are eliminated by *this surface*, which, in the Negro especially, performs excreting functions, very evidently in aid of those of respiration, and of biliary secretion. In the white variety of the species, on the other hand, the functions of the lungs and liver are much more active than in the darker races, changes to a greater extent being performed by respiration in the former than in the latter."—B.]

The close sympathetic connexion which exists between the skin and stomach is manifested in the clearest manner by the effects which

occasionally follow the ingestion of certain alimentary substances. But these effects seem to depend rather on idiosyncrasy than on the nature of the substance ingested. Muscles, oysters, and other shell fish, lobsters, shrimps, mushrooms, honey, almonds, strawberries, raspberries, cucumbers, and vinegar, are the substances which most frequently produce the effects now alluded to; the same results, but more rarely, have been known to follow the use of meal, apples, rice, and even the least irritating eatables.

In many cases the influence of this sympathy is slight, in others it is strong. In some warm countries, for example, the habitual use of certain kinds of meat, particularly pork, contributed greatly to the spread of tubercular lepra and Elephantiasis Arabum, hence the experience of Moses and Mahomet induced them to forbid the use of pork to Jews and Mussulmen. The restrictive laws concerning this article of diet were evidently founded on the rules of public health, and even as late as 1779, Baron Larrey witnessed the injurious effects of pork and salt food on the French soldiers in Egypt, the continued use of which occasioned more or less general disturbance, whilst a great many were attacked by leprous eruptions, appearing first on the face, and subsequently on the extremities. In Scotland the use of oatmeal is commonly supposed to produce a number of cutaneous diseases. Pellagra, a common disease in Lombardy, is supposed to be caused by the constant use of maize or Indian corn. The action on the skin of solid or liquid matters employed for food is well known, but this is peculiarly true of wine, coffee, salt, pepper, &c., when taken in excess. On the other hand, disease may be engendered by total abstinence from these stimulants; thus, the *gutta rosea* of water drinkers is cured by the use of stimulant fluids. Gangrenous affections are sometimes produced by the use of putrid meat, and it is well known that eruptions, resembling roseola and urticaria, are occasionally excited by copaiva, belladonna, &c.

Many other facts, which prove the intimate connexion existing between the skin and stomach, are mentioned by authors, and Lorry in particular dwells upon this point. Excesses of diet may certainly act as exciting causes of diseases of the skin, but it is certain that at Paris, as elsewhere, bad food, poverty, and filth, are the most frequent causes of these affections.

The copious perspiration produced by exercise, and the consequent excitement of the skin, show how powerfully it is influenced by the motions of the body. Hence long-continued fatigue is a powerful predisposing cause. On the other hand, Lorry affirms that rest never gives rise to any cutaneous malady. The want of rest likewise has much influence as an exciting cause, producing herpes, acne, erysipelas; and the same remark applies to grief, strong moral impressions, &c.

The humoral pathologists attributed great influence in the production of cutaneous disorders to various derangements of secretion or excretion. The skin was regarded as the natural emunctory of every kind of humour which did not pass off in the usual way. The existence of any disease in the skin was considered as a proof that some morbid humour required to be carried off, and the morbid condition of the integument as a salutary effort of nature to relieve the economy. Again, experience has proved that diseases of the skin often followed the suppression of some habitual discharge, and that evacuants were useful remedies in their treatment. This further strengthened the doctrine of the humorists, and when retention of humours failed to explain the presence of disease, they had recourse to acridity, thus creating a vicious circle from which it was impossible to escape. We regard the suppression of habitual evacuations as an occasional cause of cutaneous disease, and we think that this cause should not be neglected; but we are far from giving it the same weight as the humorists. We would apply the same remark to acridity of the blood, bile, or lymph, milk, &c. which, in the opinion of some authors, are influential causes of cutaneous disease. Stimulant applications to the skin often give rise to disease of the part. Thus, erysipelas or erythema may follow exposure to the sun's rays; and prurigo occasionally follows sea-bathing, and want of cleanliness. Frictions with irritant ointments, particularly the citrine, may produce vesicular eruptions; eczema often attacks the hands of persons who handle pulverised substances, or expose these parts to heat, a blister, &c. Many cutaneous diseases arise from contagion; here, the disease produced is always identical with the one whence it has arisen; as examples, we may mention small-pox, measles, scarlatina, itch, porrigo, and syphilis; amongst external occasional causes we must reckon that peculiar state of the atmosphere called "the prevailing medical constitution."

External violence, sudden cold, suppression of habitual evacuations, and neglect of regimen, are causes of cutaneous disease. Strong mental emotions, and grief in particular, exercise a remarkable influence. The pupils of Biett must have heard him mention several examples of this, and especially the case of a young person who was attacked, within a period of twelve hours, by very severe *lichen agrius*, after having received some unpleasant news.

Cutaneous diseases, as we have already mentioned, frequently arise under the influence of a peculiar individual disposition, through which the disease is determined towards the skin rather than to any other part of the body. This predisposition is sometimes absurdly denominated *dartrous*, a useless word, which only means a great disposition to cutaneous disease, but it cannot be denied that certain constitutional affections create this tendency. Scurvy, scrofula, rheumatism, gout, and especially syphilis, are examples. In England, scurvy was for a long time regarded as the most frequent of the causes, an error which no longer exists. Syphilis is, above all, worthy of attention, as an occasional cause of cutaneous disease, and that dreadful malady, lupus, is almost always connected with a scrofulous taint of the constitution. The obscure connexion that sometimes exists between certain diseases, as gout, rheumatism, hemorrhoids, and affections of the skin, has been for a long time observed. Erythema, erysipelas, and purpura, frequently accompany plethora, or a derangement of the menstrual function in females. Roseola and urticaria often co-exist with fever. Finally, pellagra, and some other cutaneous disorders, seem closely connected with irritation of the stomach and bowels. The latter connexion certainly exists, but we must not exaggerate its influence; diseases of the skin may arise from sympathy with the gastro-intestinal mucous membrane, but this is very rare (?) in the majority of cases this membrane is perfectly healthy, and it is towards it that we commonly direct our treatment; while, on the other hand, a cutaneous disease will disappear on the occurrence of intestinal inflammation, and return when the latter has been dissipated.*

A general deterioration of the health, arising from age, misery,

[* It is by no means unfrequent in this country for cutaneous eruptions to originate in gastro-intestinal irritation. In fact, it is a very common source of some of those complaints, which often disappear rapidly, on the subsidence of the former.—B.]

and privations of every kind, is often an exciting cause of certain forms of ecthyma, rupia, and chronic pemphigus. In Egypt, and other southern climates, the pustular disease called Elephantiasis Græcorum, or tubercular lepra, seems to depend on these causes. Even in our own times we have seen the same affections produced by the same causes; and similar causes seem to have exercised considerable influence, during the middle ages, upon the propagation in Europe of the lepra brought from Palestine.

The cases to which we allude occurred in the practice of Biett. One was that of a young Portuguese student, who, while flying from the satellites of Don Miguel, was compelled to hide himself in a cave near Coimbra, where he underwent the severest privations; he was attacked by tubercular lepra, and when we saw him, his case was hopeless. The other occurred in the person of a young German, on his way to the United States; he had walked with several of his countrymen from Nassau to Havre, but their resources had failed on their arrival at this latter town, and they passed the winter in the greatest misery, exposed to cold, and lying on the bare ground. He was seized with elephantiasis of the scrotum, and died in the hospital of St. Louis, whither he had been sent from Havre.

Biett also saw a case of *porrigo favosa*, covering nearly the whole body, and produced by long confinement, with privation, in a low, damp prison.

Experience shows that diseases of the skin may be caused by what we call, for want of a better name, *critical* influences; nature thus sets up a salutary derivation towards the skin. As to the cause of the *special* form which cutaneous disease may assume, we are completely ignorant; we cannot tell why the exciting cause should in one case produce a pustule, in another a vesicle, in a third a papule, yet it is to this obscure point all our efforts should be directed, for on it probably depends the secret of the precise seat of cutaneous diseases.

[My own experience leads me to place much more importance in the sympathetic relation that exists between the skin and gastro-intestinal mucous membrane, as a frequent *cause* of cutaneous disease, than the authors think it merits. I believe that the great

majority of diseases of the skin are neither more nor less than external manifestations of disturbance of one or other of the vital functions, or disorder of the mucous surfaces. We must take a more comprehensive view of cutaneous maladies, and study this class of affections more in the light of general diseases than we have been accustomed to do, if we wish to arrive at an accurate knowledge of their nature and causes: for daily observation proves that the study of diseases of the skin cannot be detached from that of general pathology, and of the many morbid conditions with which they have such numerous and varied relations. Indeed it would be a grave error to separate certain cutaneous eruptions from lesions of other systems, when both derive their origin from the same cause, and are in reality but different symptoms of one and the same disease. The eruptive fevers, and the syphilides, for example, are the sequels of constitutional diseases, and to view them in the light of special or local affections, would be to mistake their nature altogether. Erysipelas and acne frequently supervene in cases of derangement of the uterine functions. Strophulus is associated with the process of dentition. Urticaria, lichen urticatus, and several varieties of herpes, are often the results of a disordered condition of the digestive organs. Psoriasis and lichen agrius frequently occur during the progress of gout and urinary diseases, and the hereditary nature of certain eruptions, as lepra, psoriasis, lichen, is beyond all doubt. Unless we bear in mind in our treatment of these maladies, their intimate relation with the organic functions, we are constantly liable to serious error. If, for example, we were to look upon those critical eruptions or discharges which occur at certain periods of life, as *local* diseases, and were to attempt to suppress them by topical applications, it is unnecessary to add that serious consequences would result; whereas, if they are not interfered with, they will get well as soon as the equilibrium of the system is restored. The impetigenous eczema of infants, and those eruptions which occur at the periods of puberty and the turn of life, are examples of this kind. A knowledge of cutaneous diseases, in fact, implies familiarity with the general principles of pathology; and, above all, with the doctrine of the sympathies, with general infections, idiosyncrasies, the effects of regimen and mode of life.

The theory of the vegetable origin of certain diseases of the scalp

—first propounded by Unger, in 1833—attracted the attention of dermatologists to that subject, and has found several supporters, amongst whom I may mention the names of Schöenlein, Gruby, Meynier, and Gibert. The disciples of Unger have extended the application of his theory to cutaneous eruptions of other parts of the body. Thus, Gruby has announced the vegetable origin of sycosis—in short, that this disease is a species of cryptogamic plant. This writer considers the vegetations of *favus* to belong to the group of *mycodermata;* while Unger is of opinion that the favi are analogous to the "exanthemata of plants." Admitting the existence of these vegetable fungi in favus, sycosis, &c., it is sufficiently evident, from the memoirs of Gruby and Dr. Hughes Bennett, that they are the result and not the cause of these diseases; moreover, it does not appear that they are invariably present in all cases. It seems to me that these so-called vegetations are mere *moulds*, consecutive of the elementary disease, and not the disease itself. Mr. Erichsen is of opinion that the elementary lesion of favus is tubercle, and not a vegetable. No one now doubts the existence of the little insect (*acarus scabici*) in the human skin in cases of itch; but it by no means follows that it is the origin of that disease.

It is not sufficient to be able to tell whether any given disease be pustular, papular, or vesicular: we must go farther than this, and endeavour to unravel the intimate nature of the eruptions themselves, in order to arrive at a knowledge of those general laws which must necessarily regulate their progress and development. The recent and valuable discoveries in the anatomy of the skin by Schönlein, Gruby, Simon, Henle, Bowman, and others, are eminently calculated to facilitate our attempts towards establishing a more enlightened pathology; for it is evident that the vague and erroneous notions which formerly prevailed on the structure of the cutis, were the chief means of arresting inquiry into the lesions of that organ, and of involving the whole subject in an obscurity which had become proverbial.—B.]

Diagnosis.—The differential diagnosis of diseases of the skin is one of the most important points connected with their history. Without it, how can we form an opinion as to their nature, or decide upon the treatment? Mistaking scabies for lichen, prurigo, or

eczema—errors which are, even now, by no means unfrequent—may cause great uneasiness in families; or mistaking a simple eruption for a syphilitic one, or overlooking the latter when it does exist, has often caused serious evils. In diagnosis consists the entire study of diseases of the skin. We shall, therefore, endeavour to lay down some general rules for our guidance.* The chief point is to determine the elementary lesion; this done, we have merely to compare the disease with the few which possess the same elementary characters. In cases where the elementary lesion remains unaltered, we have simply to ascertain whether it be a papule, vesicle, scale, &c. and this generally is a very easy task. Our next step is to determine the species, and here we are aided by the *form*, *seat*, *progress*, &c. of the eruption.

For example, a patient has on the inner side of the arm, between the fingers, &c. a number of *small collections of serum*, distinct, acuminated, transparent at the point, and accompanied by itching, &c. On carefully examining, we find that the elevations contain no pus, that they are not solid and resisting, that they are not papular eminences covered by a scale, nor an injection of the skin which disappears under pressure; the disease is therefore *vesicular*. We have then to find out to what species of vesicular affection it belongs. And in carrying out this process of elimination we soon arrive at a positive diagnosis. It is neither *miliaria* nor *varicella*, which are accompanied by constitutional symptoms; and besides, in the former eruption the vesicles are globose and numerous; in the latter, larger and more inflamed: it is not *herpes*, for in herpes the eminences are collected together in groups, while in the present case they are diffused: it must therefore be either eczema or scabies; but it is not eczema, for the vesicles of eczema are flattened, while here they are acuminated: in eczema they are generally more or less agglomerated, while here they are distinct; *ergo*, it is scabies.

The example which we have just given is a simple one; but the diagnosis is sometimes more difficult, even when the elementary character of the disease remains in part: thus scabies, which is

[* The authors say, in their last edition, it is in diagnosis the classification of Willan displays its great advantages; for, as they truly remark, if a natural classification should hereafter be formed, that of Willan will always be retained for the purpose of diagnosis.]

generally detected with readiness, may sometimes present some difficulties of diagnosis, especially when the vesicles have been destroyed by scratching; but in such cases we are assisted by various secondary indications, such as the seat of the eruption, the appearance of its accidental varieties, the precursory and accompanying symptoms.

But a mere knowledge of the elementary character of a cutaneous disease is not sufficient for its diagnosis; this character may have disappeared, and given place to the secondary or consecutive lesions. The fluid of a vesicle may, for example, dry off and leave a small incrustation; a pustule may be converted into a scab, and the latter give way to an ulcer; hence it is necessary that we should study these secondary lesions, and know to what primary characters they correspond. Incrustations may succeed vesicles, vesico-pustules, and papules; scabs occur in most pustular diseases, and ulceration may be a consequence of rupia, ecthyma, &c.

In cases like the foregoing, we must first ascertain the nature of the secondary lesion, then determine its corresponding primary element, and finally pursue the course just pointed out. For example, a patient comes to us with a disease of the skin, characterised by thick, rough, yellow scabs, which cover a large portion of the extremities, especially the legs, and when they fall off, expose superficial excoriations; the latter discharge a purulent secretion, which dries up, and forms fresh scabs, these being the most characteristic features of the disease. Now it is easy enough to tell at once that this is a pustular affection, but not so easy to determine its species. The disease is evidently neither *variola* nor *vaccinia*; the pustules of *ecthyma* are large, isolated, and frequently covered by black, tenacious scabs, which end in ulceration; it is neither *acne* nor *mentagra*, the pustules of which rarely ever give rise to scabs, and are especially followed by chronic indurations. The only affections, then, that remain are *impetigo* and *porrigo*, and we have merely to compare the character of these two species in order to decide. It is unnecessary to enumerate here the signs by which we know that the disease is not porrigo; it is therefore impetigo, and as the scabs are scattered irregularly over the limb, it is *impetigo sparsa*. Sometimes the distinctive characters are not so marked, and the diagnosis is attended with considerable difficulty; but we

have supposed that there were no defined traces of the elementary lesion in the preceding cases, whilst in the great majority, on the contrary, distinct signs are always to be found in the vicinity of the eruption.

In some cases different elementary lesions occur in the same subject; but in this instance we always find some predominant form, of which the rest are but complications. However, it may happen that we cannot ascertain at once the true nature of the disease. This occurs in certain chronic affections, where the elementary character gradually disappears, and seems confounded in a different order of phenomena. Even here a sudden exacerbation of the disease, or a return to health, may develope its primary character. The general remarks which we have just made do not apply to those orders which are not characterized by special elementary lesions; but the latter are distinguished by phenomena which we cannot mistake; or even, when they assume, as in syphilis, the elementary forms of other cutaneous diseases, they present certain special appearances, which leave no doubt about their nature. Finally, we must neglect nothing which can assist us in our diagnosis of cutaneous diseases. Beside the elementary characters, there are many signs, as the seat, form, and colour of the eruption, its progress, condition of the patient, &c., which strike the practised observer, and enable him often to dispense with details.

Prognosis.—The prognosis of diseases of the skin is intimately dependent on their differential diagnosis. They are rarely dangerous enough to compromise life, if we except the exanthemata.* The prognosis of tubercular lepra, elephantiasis, and lupus, is, however, always unfavourable. Scaly diseases are probably more intractable than pustular or vesicular; but in all cases our opinion should be guarded, for trifling cutaneous affections are often extremely obstinate of cure.

The general state of the patient's health, and the influence which it exercises on the disease, require our utmost attention. In some cases the cutaneous disorder is a salutary effort of nature, and we should avoid interfering with it, or proceed cautiously and slowly when it is necessary to get rid of it; the practitioner must, how-

[* The cutaneous diseases of children, however, form an exception to this rule: for they are often attended with fatal results.]

ever, be guided by an attentive study of the patient's constitution, the state of the viscera, and the history of the case. We do not belong to that class of practitioners who attribute so much importance to the sudden disappearance of cutaneous disease. We know that many times even chronic affections of the skin gradually disappear under the influence of some visceral irritation, and return slowly as the patient is restored to health. The vulgar will tell you, in such cases, "that the disease went in upon some important viscus, and came out again;" but the internal inflammation therein felt, preceded the disappearance of the eruption, and the reappearance of the latter was slow, and long after complete recovery had taken place.

We also regard as an unfounded prejudice, what some authors believe, respecting the retrocession of the itch, and the numerous evils they pretend, that the premature arrest of this complaint inflicts upon humanity. Such vagaries we leave to Hahnemann and his foolish followers; while we recognise the prudence of precautionary measures in the treatment of cutaneous diseases of long standing to which the system has become habituated, and the sudden removal of which would be attended with more or less danger.

Treatment.—Diseases of the skin have been long submitted to a particular line of treatment; viz. the use of bitters, and of remedies containing sulphur, which seems to have excluded all others; within the last few years, however, several remedies of great value have been discovered, but careful observations were wanted to determine their real value, and the cases to which they were applicable; in supplying the latter knowledge, Biett has rendered a most important service. He was the only physician in Europe who had made a complete series of experiments on the treatment of cutaneous diseases, with different remedies; and it is a matter both of surprise and regret that many of the results which he has obtained should have been published by persons who conceal the source whence their knowledge was derived.*

[* No other work on cutaneous pathology, or, indeed, on any branch of medicine, has been so victimized by plagiarists as this manual. The practical part of several modern English works on Diseases of the Skin derives its origin from this source and one individual has given to the pro-

The remedies employed in the treatment of diseases of the skin may be divided into local and general. Of the former, emollient remedies (amongst which we reckon baths) are those with which we should, generally speaking, commence. They often cure the disease without the assistance of any other means. To mention the great variety of local remedies employed would occupy too much of our time; the principal are decoction of meal with bran, barley, emollient flowers or roots, solutions of gelatine, potato flour, poultices of ground rice, local or general baths, milk, &c. Fatty substances are often employed in the form of ointment or pomatum, but we should be very careful how we use them; they should always be perfectly fresh, and even then are subject to become rancid; hence the cerates are preferable. Lorry believes that fatty matter acts by causing the accumulation of insensible perspiration on the surface of the skin, and thus producing the effect of a kind of local bath.

Among local soothing remedies we would place certain preparations of lead, hydrocyanic acid, cherry-laurel water, and the cyanuret of potassium, which often act like a charm in appeasing itching. Heberden recommends local stimulants in cases where the itching is very severe, but Bateman justly remarks that this treatment only applies to cases in which the epidermis remains intact;* otherwise emollient and soothing remedies are preferable.

The temperature of emollient applications, such as baths, poultices, embrocations, &c., should not exceed 90° F. But when there is much heat, pain, and itching, great benefit may be derived from the use of water cooled down to 36° F. The linseed meal so often employed for poultices is seldom fresh, and frequently causes irritation, or even pustular eruptions.

fession, as an original work, bearing his signature, a literal translation, *verbatim et literatim*, of an early edition of this volume, with the simple modification of two or three lines of introductory matter at the head of each chapter. No wonder that M. Cazenave should express his "surprise and regret" at such moral obliquity.—B.]

[* The student will derive much assistance from a good magnifying glass, while observing the progress of the eruption during the early period of the disease. It will also materially facilitate the diagnosis in difficult cases, by giving the observer a more correct idea of the elementary lesion, than he could obtain with the naked eye.]

[In the last edition, the authors say that they have for some time substituted potato-starch for flax-seed, and for several years past have discontinued the use of moist and even emollient applications, and have sprinkled the affected parts with dry starch or powdered rice with the best results.]

Finally, amongst local means we must not forget leeches. These should never be applied on the diseased skin, but in the neighbourhood, unless, indeed, the quantity of blood abstracted is such as will compensate for the irritation produced by their bites. Successive applications of leeches will generally be required.

Local excitants are of various kinds, and often very useful; they seem to modify the vitality of the skin. They comprise vapour baths and douches, alkaline baths, sulphureous baths of every kind, lotions or ointment containing mercury, sulphur, iodine, &c. When speaking of the particular treatment of each disease, we shall consider these preparations more fully. When an increased degree of irritation is required, great benefit may be derived from blisters applied after Paré's plan. Should it be necessary to change the state of the diseased surface completely, or check the progress of some destructive malady, we have recourse to caustic. Acids in various states of dilution, and especially the hydrochloric, may be employed, or the nitrate of silver passed lightly over the surface; in some cases a single application is sufficient, in others we must frequently use the caustic before a lasting effect is obtained.

In cases of *lupus* more powerful caustics are required; the arsenical paste of Côme is one of the most efficacious, but it requires a practised hand for its use; we have also the binitrate of mercury, either alone or dissolved in concentrated nitric acid; or the chloride of zinc may be employed with advantage instead of them.

Before speaking of constitutional treatment we may ask, is it always necessary to have recourse to general remedies? May we not obtain a cure by local means alone?

In some rare cases, where the cutaneous disease is slight and limited in extent, local means may suffice; but, generally speaking, a constitutional treatment is necessary, for cutaneous diseases are almost always connected with some derangement of the general health, against which local remedies are powerless.

The constitutional means employed in the treatment of diseases of the skin are extremely various. They comprise blood-letting, purgatives, alkalies, acids, antimonials, preparations of sulphur, sudorifics, and, finally, the tincture of cantharides and preparations of arsenic or mercury, which evidently act in a direct manner on the skin.

General blood-letting is required, not only in various acute diseases of the skin, but many others, where at first sight excitants might appear to be requisite. Even in chronic skin affections, it is very useful in young and robust patients. [Not in England.—B.]

Purgatives are frequently employed in the treatment of cutaneous diseases. When the alimentary canal is in a healthy state, they are very beneficial in effecting a slow and long-continued derivation; hence we should generally employ them in small doses, and suspend their use from time to time. The remedies in common use are calomel, the soluble sulphates of magnesia and potass, jalap, aloes, gamboge, cream of tartar, &c.*

Alkalies and *acids*, when properly diluted, are very useful in allaying itching; they also act directly on the skin. Hydrochloric acid is the one most commonly employed in France.

Antimonials were much in vogue amongst the earlier practitioners, who placed far greater reliance on them than they deserve.

Preparations of *sulphur* are by many regarded as specific in diseases of the skin. They are, in truth, highly efficacious, but we must confess that they sometimes fail, and occasionally aggravate the disease. But their use, whether locally or internally, requires more experience and tact than is generally supposed, and it is a great mistake to employ them indiscriminately, as too many practitioners do. Sulphureous waters are either natural or artificial; they may be used in baths, douches, or in vapour. Sometimes they are employed alone, at other times diluted with gelatine or any other emollient substance.†

Sudorifics comprise antimonial remedies, of which we have spoken already; the remainder, such as sarsaparilla, guaiacum, &c., are now

[* In the treatment of cutaneous diseases in this country, I have never found purgatives of any use, further than that of evacuating the bowels occasionally during the progress of the cure.—B.]

[† The vapour of the flowers of sulphur or of cinnabar will often be found very useful as a local application in some of the vesicular and squamous diseases; especially in chronic eczema and lepra vulgaris. See Eczema.]

rarely used, except im cutaneous syphilitic disorders. Dulcamara, saponaria, Rhus radicans, and Daphne mezereon, have been highly extolled formerly by some English physicians.

Biett has obtained the greatest benefit from the use of tincture of cantharides and the preparations of *arsenic*. The experiments of Biett prove, in the clearest manner, their efficacy. Yet, notwithstanding this evidence, the remedies now alluded to, have been attacked in the most extraordinary manner. They deteriorate, it is said, the health, and give rise to disorders which break forth after the lapse of time with great violence. These attacks are completely unfounded, and have become futile, in face of the numerous facts which constantly prove their absurdity.

The powerful remedies of which we speak may, when carelessly or ignorantly administered, produce certain accidents, but the same remark will apply to many other medicinal substances, as corrosive sublimate, tartar emetic, quinine, &c. Besides, we have seen them employed in a great number of diseases of the skin with the following results in a majority of cases:—1st. Complete and lasting cure of the most obstinate affections. 2nd. Occasionally slight derangement of the health, requiring the remedy to be suspended for a few days only. 3rd. We have never met with those dangerous accidents so much talked of by a set of designing persons, who have no facts to support their opinions. We are, therefore, prepared to assert, from experience, that arsenic, when properly administered, is an *heroic* remedy in the treatment of cutaneous disease; and we furthermore can affirm, that we have seen patients, months and years after having undergone a course of this medicine, who never experienced the slightest inconvenience from it.*

[The relation of cutaneous diseases to general pathology claims our special attention. If we assume, and it is not far from the truth, that the great majority of diseases of the skin is the result of constitutional debility and disorders of the digestive organs and of the fluids, it is clear that an inquiry into the condition of the functions must be instituted, and their present state ascertained,

[* "Some poisons are considered cumulative, but this is not. The moment arsenic begins to absorb, its action commences."—Dr. Alfred Taylor, *at the Trial of Sarah Barber, at Nottingham, July* 25, 1851.—B.]

as far as it may be, before a correct method of treatment can be prescribed. The doctrine of crises is intimately associated with the history of eruptions of the skin; and it is of as much importance to know whether a given eruption is a critical and salutary discharge, or natural counter-irritant, as to be able to tell the tissue in which it is seated, and its anatomical element. If, for example, a patient presents himself with an eruption which does not appear to be produced by any external or accidental cause, it is the duty of the physician to ascertain if it is the result of organic disease or constitutional disturbance; and if we examine with ordinary care and minuteness the previous mode of life of the patient, the state of the constitution, and the antecedent diseases, we cannot fail to arrive at the true origin of his complaint.

For instance, we frequently find a certain form of impetigo to be in reality merely the expression of an exaggerated lymphatic temperament; an obstinate variety of eczema, the external manifestation of functional disturbance of the apparatus of secretion, and frequently of the digestive organs; acne is commonly associated in females with disorder of the uterine functions; prurigo with an exalted state of the nervous system; and pemphigus with organic disease of the liver. It is obvious, that to treat any of these eruptions as special diseases of the skin, and of entirely local origin, would be acting more in accordance with an irrational empiricism than with the true principles of medicine. Again, the hereditary predisposition which undoubtedly exists in numerous cases towards the production of what may be called the *special* diseases of the skin, should be taken into account in the treatment of any of those complaints. Lepra, psoriasis, and ichthyosis belong to this class. They are often the result of a vicious modification of the economy which is hereditary and altogether inexplicable. I have observed patients with arms literally encased in a scaly envelope of psoriasis, otherwise enjoying the best possible health. The internal functions, except that of the kidneys, are undisturbed, and the chief inconvenience experienced was the mechanical impediment caused by the thick scaly covering to progressive motion. The different periods of life have also a peculiar influence in the production of skin complaints, which it will be well to bear in mind.

It is during the periods of infancy and childhood, for example, that we most commonly meet with certain forms of impetigo, variola, scarlatina, and measles. Whereas, in the decline of life we observe those chronic, non-specific eruptions which indicate an enfeebled and decaying vitality. There is, besides, a degree of irritability and delicacy in the skin of some individuals, especially in females, which renders them more susceptible of cutaneous eruptions than persons of duller sensibility of the surface. This condition is often hereditary, and individuals so circumstanced are generally attacked in spring or summer with one or other of the slight ephemeral diseases. A warm temperature, either natural or artificial, by causing increased determination to the vessels of the surface, or spiced food, and malt or spirituous liquors, exaggerate this state of irritability into that of disease, and consequently should be avoided. Indeed, as Alibert has well observed, we should regard the skin as the double instrument of exhalation and absorption, the deposit or reservoir of an exquisite sensibility, the agent of most favourable crises in disease, and not merely as a means of defence against the contact of external substances, capable of injuring more vital parts, as it is popularly considered.

Disorders of the urinary organs, are intimately associated with disturbed functions of the skin,—another proof of the necessity of studying cutaneous diseases in the light of general pathology. I have had several patients under my care suffering from chronic disease of the kidneys, whose health seemed broken down, and in whose treatment all the ordinary remedies failed, perfectly relieved by the active operation of the transpiratory functions of the skin. This result is strikingly evident in cases of uric acid gravel. Warm clothing, dry friction, and the vapour bath, (the best of all diaphoretics,) are very effectual remedies.

Since the last edition of the Manual was published, several remedies have been introduced into practice of considerable efficacy in the treatment of cutaneous diseases. I may mention especially the preparations of phosphorus, collodion, glycerine, chloroform, and juniper. The practice of blood-letting and purgatives, formerly so much in vogue in the treatment of inflammatory diseases of the skin, is superseded by the more rational and more effectual agency of baths and active diaphoretics. The papular eruptions (Lichen-

Prurigo,) which are the Neuroses of the skin, as I have pointed out in the *Medical Gazette* of June, 1849, are properly treated by antacids and antispasmodics, as strychnia; and the treatment of diseases of the scalp, so long the opprobrium of dermatologists, is simplified, and materially improved. In one of the most inveterate of the eruptions occurring on this region (porrigo favosa) cod-liver oil will be found frequently a most effectual remedy. This disease is associated with filth, poverty, and vitiated nutrition, and the practitioner will soon find the salutary effects of cleanliness, and the oil of the cod's-liver, in its treatment both internally and externally.

Dr. Golding Bird is perfectly correct in stating that in cases of lepra, psoriasis, and ichthyosis, where the excreting functions of the skin have been much impaired, the urine is much richer in urea than is consistent with health. He also remarks: As a general rule, whenever the functions of the skin are impaired, when a due amount of secretion is not exhaled from the surface, an excess of nitrogen is retained in the blood, and ultimately separated by the kidney, in the form of urate of ammonia, or perhaps urea, or perhaps creatinine, which substances contain respectively 38, 46, and 37 per cent. of this element. A person in apparently good health experiences, from exposure to a current of cold air, a slight check to perspiration, and the next time he empties his bladder, he voids urine of a deeper colour than is usual with him, and on cooling it becomes turbid from the precipitation of urate of ammonia. The explanation of this phenomenon is found in the kidneys assuming temporarily a kind of compensating function for the skin. It is true that uric acid, or urate of ammonia, is not naturally expelled from the surface of the body, but certain organic matters, rich in nitrogen, certainly are; and if their proper emunctory, the skin, has, for a time, its function arrested, they are probably filtered from the circulating mass by the kidneys in the form of urate of ammonia.*

The preparations of mercury, iodine, and arsenic, are amongst the most effectual internal remedies in the treatment of cutaneous disease. Of these preparations the iodides of mercury, and Fowler's and Donovan's solutions of arsenic, are the most convenient and useful. Donovan's solution of the hydriodate of arsenic and mercury may be administered to children with safety. It is composed of water ℥i.

* 'Urinary Deposits,' &c., by G. Bird, M.D., &c.

arsenious acid gr. $\frac{1}{8}$, peroxide of mercury gr. $\frac{1}{4}$, iodine, as hydriodic acid, about gr. $\frac{3}{4}$. Dose to begin with, for an adult, ♏xx., which may be increased to ʒs, three times a day. The dose of Fowler's solution which will be found most efficacious is ♏iv. to begin with for an adult, which may be increased to double that quantity twice a day. Although the scaly eruptions are thus generally recommended to be treated with arsenic, the practitioner will find that the beneficial effects of this heroic remedy extend also to obstinate forms of the pustular and papular diseases. The highly stimulating properties of the mineral render it inadmissible in persons of the nervo-sanguineous temperament, or those of an irritable habit of body. The common symptoms showing that the remedy disagrees with the patient are, frontal headache, thirst, nausea, irritation or oppression about the epigastrium, and pricking sensations about the eyelids. On the appearance of one or more of the symptoms the remedy should be discontinued, or the dose lessened, for several days. Baths, simple and medicated, come next in point of utility, and cannot be too freely, or too frequently used. The mineral acids and diaphoretics are also powerful auxiliaries in the treatment of diseases of the skin.

I have found the juniper tar ointment, as recommended by M. Velten, of Aix-la-Chapelle, an exceedingly useful local application in several eruptions of an irritable character, as for instance, some forms of eczema. The following is the formula used by M. Velten.

℞ Olei pyrolig. juniperi . . . . ℥iss.
Adipis ovilli . . . . ℥ss.
Œxungiæ porci . . . . ℥iss.
M. et ft. unguentum.

To be rubbed in at night, and washed off in the morning.

He also recommends a juniper tar soap, in cutaneous affections of a torpid character, as psoriasis palmaris and inveterata.—B.]

DISEASES OF THE SKIN.

EXANTHEMATA.

Exanthematous Eruptions.

The word 'Εξάνθημα (from Εξανθέω, *effloresco, erumpo*) was employed by Hippocrates, and the Greek physicians, to designate all kinds of eruptions without distinction, and many later authors have made use of the term exanthema in a no less vague and indefinite manner. However, several nosologists, as for example, Sauvages, Cullen, Lorry, and Frank, have, with the view of giving it a more precise signification, confined the word exanthemata to certain forms of inflammation of the skin, accompanied by fever, and presenting distinct periods of invasion and declension. We shall use the term in the sense in which it was employed by Willan, and subsequently by Biett, to the following effect :—

The exanthematous diseases are inflammations of the skin, characterized by constitutional disturbance, and a diffused redness which disappears for a moment under pressure of the finger.

Erythema, erysipelas, roseola, measles, scarlatina, and urticaria, belong to this class. The exanthemata may spread over the whole of the cutaneous surface, but in general some are confined to certain limits, while others are diffused, and cover a great part of the body. The special seat of these diseases appears to be the superficial layers of the cutis vera, and especially the vascular layer. In some severe cases, however, the inflammation not only extends to the different layers of the skin, but also to the subcutaneous cellu-

lar tissue. With the exception of urticaria, erythema, and chronic or intermittent erysipelas, these affections generally pursue an acute course. Their duration varies from one to three weeks. Urticaria and one of the varieties of erythema may be prolonged for several months, and even for years.

The exanthematous diseases are generally preceded by a certain degree of languor, by rigors, thirst, and anorexia, but each disease has its own peculiar characters. Thus, each variety presents redness of the skin, which disappears under pressure of the finger, and returns on removal of the pressure; but this redness is much less intense in roseola than in erythema and erysipelas, and may be either temporary or permanent in the different forms of urticaria; in the latter affection it is sometimes diffuse, sometimes circumscribed; hence the cause of the irregularly formed patches by which it is so often characterized. Erysipelas is accompanied in particular with pain, heat, and swelling; and urticaria, on the other hand, is attended by a smart itching.

The exanthemata are frequently complicated with gastro-intestinal inflammation and with cerebral and pulmonary diseases. It is owing to one or other of these complications that they sometimes terminate fatally. They generally terminate by resolution. The epidermis becomes furfuraceous, and falls off, or else scaly lamellæ form, of various shape and extent. In scarlatina, the cuticle desquamates repeatedly; and erysipelas may be followed by suppuration and gangrene. *Post mortem* examinations of persons dead of these diseases, do not throw much light on their nature and causation. A brownish red tint is sometimes observed in the vascular network of the skin, especially if that tissue had been highly injected during the progress of the disease. Sometimes serum, and even a small quantity of blood are found effused in the cutaneous tissue. In phlegmonous erysipelas, pus is infiltrated into the subcutaneous cellular membrane.

Measles and scarlatina are propagated by contagion, and rarely ever occur more than once in the same individual during life. The rest of this class of affections may result from more direct causes, but in general they depend on a peculiar condition of the system not clearly understood. Generally speaking, however, they accompany inflammation of the mucous membranes, and especially an unhealthy

state of the digestive organs. Erythema appeared in Paris in 1829, in an epidemic form.

Diagnosis. No other class of cutaneous affections is characterized by that particular redness, disappearing under pressure, which is diagnostic of the exanthematous diseases. This of itself is sufficient to distinguish them from purpura and ecchymosis. In the negro the colour of the inflamed skin, instead of being red, is even darker than natural. Several papular, vesicular, and bullous eruptions may be complicated with the exanthemata. It was in consequence of the frequency of these complications that Willan placed erysipelas amongst the bullæ. The prognosis and treatment of the exanthematous diseases should be regulated according to the extent of the inflammation, the age, and constitution of the patient; and above all, according to the severity of the accompanying lesion. A mild and simple plan of treatment will in many cases be sufficient. In some instances, however, the disease must be attacked with more energetic measures. It is impossible, as may easily be imagined, to lay down any precise line of treatment for a class of diseases which appear under such various forms and degrees of intensity. The period of convalescence is generally long, during which, several diseases, especially hooping cough, anasarca, and chronic diarrhœa, may supervene. Hence it is important to attend to the general health for some time after the eruption has disappeared.*

ERYTHEMA.

SYN.—Inflammatory Blush; Tooth Rash; Gum; *Intertrigo; Maculæ Volaticæ; Dartre erythemoide.*

Erythema ('Ερύθημα) is a non-contagious, exanthematous affection characterized by slight superficial red patches, irregularly circumscribed, and of variable form and extent. Although it may

[* Several writers on cutaneous pathology hold that the Exanthemata should not be included in a work treating specially of diseases of the skin, and have accordingly omitted them. I think the authors have exercised a sound discretion in retaining this group of affections in their Manual; for if these were rejected, it would be difficult to show why other *symptomatic* diseases of the skin were retained, which might also be objected to on similar grounds.—*Vide* Dr. George Gregory's *Treatise on the Eruptive Fevers.*—B.]

appear on every part of the body, it is most frequently seen on the face, the chest, and the limbs. It is generally confined to one or other of these regions, but it sometimes spreads over the whole body. Erythema usually pursues an acute course, and its duration varies from a week to a fortnight. In a few rare instances it assumes an intermittent, and sometimes even an essentially chronic character. When it accompanies ague, or supervenes during the paroxysms of inflammatory fever, its duration will be longer or shorter, according to that of the diseases with which it co-exists.

Symptoms.—Erythema is seldom preceded by febrile symptoms. It appears in the form of patches, of variable extent, and of a light superficial red colour, very different from the deep and intense hue of erysipelas. The redness disappears for a moment upon pressure of the finger. There is little or no heat or pain. The stains or patches are sometimes accompanied with either an indolent or a painful and circumscribed degree of tumefaction, which invests the eruption with a peculiar aspect, and constitutes two distinct varieties of erythema.

One of these varieties (*Erythema papulatum*) occurs most frequently in females and in young men, on the neck, the chest, the arms, the back of the forearm, and the back of the hand. The patches are small, seldom exceeding the size of a fourpenny-piece; they are irregularly rounded and slightly prominent like papulæ. The red colour soon changes into a violet hue, especially in the centre of the patches. In the course of thirty-six or forty-eight hours the tumefaction diminishes, and nothing remains but the red colour, which gradually declines, and disappears altogether in the course of a week or two. In other cases, however, the patches remain longer, and are much more prominent. (*Erythema tuberculatum.*)

Erythema nodosum occurs most frequently in children, in females, and in young persons of both sexes of a soft and lymphatic temperament. It generally appears on the extremities, and particularly on the anterior part of the leg. Slight constitutional disturbance, depression, loss of appetite, frequently precede or accompany this eruption. The red patches are of an oval form, slightly raised towards the centre, and their diameter varies from a few lines to an inch. On passing the hand over these patches, they are found to be

elevated a little above the level of the skin; the tumefaction gradually increases, and in a few days from their first appearance, small red, painful tumours appear, which seem inclined to suppurate, but they immediately diminish in size; the original red colour is replaced by a blue stain; they soften, and disappear gradually in the course of twelve or fifteen days. If the fingers are passed lightly over the surface of the skin, when the tumours begin to subside, a suspicious sense of fluctuation is readily perceived, and yet there is no pus present.

Causes.—Erythema frequently results from the action of different external causes on the surface of the skin. Thus, for example, in children and persons of a full habit of body it is produced by the constant attrition of two contiguous surfaces. In these cases it usually occurs beneath the breasts, in the axillæ and groins, and at the upper part of the thighs. (*Intertrigo.* Sauvages.) Under the same circumstances it may appear between the buttocks and on the internal surface of the thighs from hard riding or walking. It may also result from the action of the sun and from cold, from the contact of acrid or irritating matter, fluor albus, gonorrhœal discharge, urine, and even from fæcal matter. It appears sometimes on the upper lip, resulting from the action of an irritating fluid which is discharged from the nostrils in coryza. Erythema is often merely symptomatic of some other affections; thus, for instance, it frequently supervenes during the periods of dentition, menstruation, and at the climacteric period, and after taking irritating food, balsam copaiba, &c. Idiopathic erythema usually terminates by resolution in the course of a few hours, or in a day or two. Slight desquamation occasionally takes place, and in *E. intertrigo* a sero-purulent exudation of a disagreeable odour is established on the diseased parts. Erythema may assume an intermittent or a periodic form, and it frequently supervenes during the convalescence of some severe disease. When it is symptomatic of an acute affection it quickly disappears on the cessation of the paroxysms of the disease, without any perceptible desquamation; hence the name *E. fugax.* It may occur in cases of anasarca, giving rise to several confluent patches scattered here and there over a smooth and shining surface. (*E. læve.*) It precedes and accompanies a great number of eruptive

diseases, assuming in each instance the forms of the eruption it accompanies.*

Diagnosis.—Erythema may be confounded, not only with the other exanthemata, but with eruptive disorders of an entirely different nature and order from itself. The following are those from which it is most difficult to be distinguished. 1. *Erysipelas.* Many authors allege that erythema is but a mild form of erysipelas. There are, however, very distinctive characters between these diseases. Erythema can only be mistaken for erysipelas when it is more diffused than usual, and when the patches lose their circumscribed appearance; even then they may be distinguished by the superficial redness of the skin, by the absence of the tumefaction and sharp burning pain which invariably accompany erysipelas, and by its mild progress and favourable termination. Erythema nodosum was supposed to be a variety of phlegmonous erysipelas. The circumscribed nature of the tumours of the former, which invariably terminates by resolution; and the absence of those severe febrile symptoms which constantly attend the progress of the latter disease, establish a well-marked distinction between both these affections. 2. *Roseola.* In this eruption the red stain is also superficial, but it has a peculiar rosy tint, which distinguishes it at once. Erythema nodosum, the only variety that can be confounded with the irregularly-circular patches of roseola, may be distinguished by the difference of the colour, which is always more diffused, and by the tumefaction which accompanies it. 3. *Measles and Scarlatina.* These diseases may be distinguished from erythema, the one by its irregularly-shaped semilunar patches, and the other by the raspberry colour and large patches which are characteristic of it. Besides, these eruptions are contagious, and are accompanied by a certain train of symptoms peculiar to themselves. 4. Erythema Papulatum has been mistaken for *urticaria.* The more elevated form of the patches, the absence of the violet colour, the disagreeable smart itching, the irregular and often fleeting course of the latter, will readily distinguish it from erythema. This variety has also been confounded

[* Erythema and roseola frequently attack females whose menstruation is irregular, producing flushings of the face, more or less constant, vulgarly called *surfeit*, and a source of considerable mental annoyance to the patient. The uterine function is that which claims the attention of the physician in these and similar cases.—B.]

with *lichen urticatus;* but in the latter the papulæ are smaller, more rounded, and solid; the colour is much paler, and they are always accompanied with pruritus. 5. *Syphilitic patches* may at first sight be mistaken for those of erythema; but their duration and coppery colour, and other venereal symptoms, which are generally present, will indicate their real nature. 6. Erythema has even been confounded with tubercular lepra! Very lately a patient labouring under this frightful disease, was sent to the Hospital of St. Louis. There were no tubercles present, and the eruption was mistaken by the former attendant for erythema. The faint red colour, and especially the insensibility of the patches, easily distinguished one from the other. The prognosis of erythema is never unfavourable.

Treatment.—Idiopathic erythema soon disappears on removing the causes which have produced it. Mild lotions, tepid baths, and attention to cleanliness, constitute the whole of the treatment required. When the eruption is produced by the friction of contiguous surfaces, either in infants or adults, these parts should be powdered with some absorbent substance, and they should be prevented, as much as possible, from rubbing together.* When erythema is symptomatic of some other disease, the treatment ought to be regulated according to the measures necessary for that affection. The erythematic blush or redness which frequently appears in females at the climacteric period, or when the menses are suppressed, require bleeding (?), diluents, regimen, and other antiphlogistic remedies. Erythema nodosum, although the severest form of the disease, seldom requires any special treatment. Baths, mild aperients, and the abstraction of a small quantity of blood, are the only remedial measures required. As this affection appears most frequently in scrofulous and lymphatic individuals, it may often be advantageous to administer a course of tonics after the eruption has disappeared.

Biett has described a remarkable variety of this disease under the name of *Erythema centrifugum.* It is of very rare occurrence, and appears most frequently in young people, especially in females whose health is otherwise excellent. It attacks the face chiefly. It

[* Fuller's earth, calamine, and powdered starch, are the best local applications. A piece of lint may also be placed between the contiguous parts.—B.]

generally appears in the form of round red patches, slightly elevated, and about the size of a shilling: these patches generally begin by a small red spot, slightly papular, which gradually increases in circumference, and sometimes spreads over the greater part of the face. The edges of the patches are prominent, and the centre, which retains its natural colour, is depressed. There is a considerable degree of heat and redness, but no pain or itching, and each patch leaves a slight depression on the skin. The causes of this variety are unknown. It sometimes coexists with dysmenorrhœa; it is an essentially chronic affection, although its appearance would indicate the reverse.

An epidemic variety of this disease appeared in Paris in 1828 and 1829, which has been described under the name of *Acrodynia*, the principal features of which were an erythematous eruption on the hands and feet, accompanied with a thickening and exfoliation of the epidermis. It was preceded, for several weeks, by uneasiness, headache, nausea, dull pains in the limbs, and obstinate diarrhœa. The soles of the feet and the hands then became numb, and the patient experienced a kind of prickling and shooting sensation in those parts, which generally increased towards night. These symptoms were usually accompanied with a perversion or diminution in the sensibility of the affected parts. Sometimes the slightest touch produced the most intense pain; and in other cases, on the contrary, the sensibility of the skin was so torpid, that the patients dropped their shoes without perceiving it, and the pavement appeared as soft as if their feet were covered with cotton. In a few instances the sense of touch was almost entirely destroyed, and in others the smoothest surfaces appeared rough and uneven when touched. This morbid condition, which occasionally produced contraction, palsy, and wasting of the limb, often existed without any apparent inflammation; but in general it was either preceded or accompanied by a certain degree of erythema, attended with the following symptoms: the palms of the hands were generally of a crimson red colour, which disappeared for a moment upon pressure with the fingers. Some of the spots were covered with a hard, thick, yellowish envelope; others again were denuded, and appeared depressed, and possessed a higher degree of sensibility. An inflammatory patch, about half an inch in extent, covered the radial

and ulnar edges of the arm. Deep erythematous red patches were often visible on the backs of the hands and about the joints. The feet presented the same appearances, only that their plantar surfaces were generally covered with a thicker and harder envelope, especially about the heels and toes. This envelope terminated abruptly at the edge of the foot on either side, and was circumscribed by a row of pretty large erythematous patches, of a deep red colour. The dorsal aspect was generally free from inflammation. Erythematous patches were at the same time often present in other regions, especially on the scrotum, in the thigh, and in the arm-pits, but without any thickening of the epidermis. In some cases the skin presented a remarkable black colour, (*pityriasis nigra*), and in others it was covered with a variety of distinct eruptions. This affection generally appeared without any fever, and often without any derangement of the digestive organs. Obstinate ophthalmia, and œdema of the face and extremities, frequently supervened during the progress of the eruption.

The progress and duration of these epidemic forms of erythema were variable and indefinite. The eruption generally continued for several months, and then disappeared gradually. It has sometimes subsided in the course of a few weeks. Persons of all ages and both sexes were attacked, but it occurred in men of advanced years amongst the poor, more than in any other class of individuals, and more frequently in males than females. Antiphlogistic remedies are those best adapted for these varieties. Leeches to the hands and feet, outside the inflamed margin, simple baths at first, and subsequently alkaline and vapour baths, and regimen, were all the remedial measures required.

[The common forms of erythema are almost invariably sympathetic affections. They are merely the reflection of disorder or irritation of the mucous surface in some of the internal organs or passages upon the skin. When the eruption is not of constitutional origin, mild lotions, tepid baths, and attention to diet and cleanliness are the only remedies necessary; but when, as generally is the case, it is consecutive upon some internal disorder, that lesion should first be ascertained, and the treatment directed through it to the skin. If, for example, the eruption proceeds from any disturbance or

irregularity in the uterine functions, aloes and myrrh, steel and bitter infusions, are the remedies indicated, bleeding and regimen being rarely necessary; so also when it is the result of derangement of the digestive or urinary functions, the application of the same general principles of medicine will lead the practitioner to a rational method of treatment. I have never found bleeding necessary in the treatment of any case of this eruption that I have seen in England.—B.]

ERYSIPELAS.

SYN.—*Rosa Volatica: Ignis sacer;* Rose; St. Anthony's Fire.

Erysipelas is an inflammatory disease of the skin, frequently involving the subcutaneous cellular tissue, characterized by a deep red colour of the parts, with pain and swelling. It may attack any part of the body, or even spread over the whole cutaneous surface, but appears most frequently on the face and limbs. The erysipelatous inflammation may be confined to the skin, or extend to the cellular tissue beneath, which is often deeply involved. We shall describe three varieties of this disease—*E. verum*, *E. phlegmonodes*, *E. gangrænosum*—which are usually preceded for a few days by general symptoms: lassitude, depression, slight or severe shivering fits, hard and quick pulse, epigastric pain, nausea, anorexia, and constipation. About the second or third day after the invasion of these febrile symptoms, the disease begins to appear. It is sometimes, however, later in showing itself.

Symptoms.—1. *Erysipelas verum.* The inflammation does not extend deeper than the skin in this variety, which is generally attended by the following symptoms:—A degree of pain, sometimes very intense, is accidentally perceived by the patient on some part of the skin; the part soon assumes a deep red colour, which spreads more or less, and the inflamed surface is much swollen, and its edges are raised. The redness disappears for a moment, on pressure with the finger, which is, however, extremely painful.

The eruption is accompanied with a sharp burning heat, and those febrile symptoms already enumerated. The epidermis becomes raised by the effusion of a yellow serous fluid between it and the cutis vera, and bullæ of considerable size are thus frequently established. The bullæ generally appear about the third

or fourth day; they burst within twenty-four or forty-eight hours after their appearance, and pour out a thick viscid fluid, which terminates in the formation of slight incrustations of various extent and form. The constitutional symptoms usually correspond with the progress of the eruption, but not invariably so. Towards the fifth or sixth day the redness fades into a yellowish tint, the tumefaction subsides, and the epidermis is folded upon itself in wrinkles. At length the morbid colour disappears altogether, and the cuticle desquamates over the dried surface. This is the ordinary and most favourable termination of erysipelas verum. When, however, the bullæ are numerous, the skin is covered with small brownish crusts, which may continue for some time. Instead of running its course on the parts where it was first developed, erysipelas may spread gradually to different parts of the body, according as it disappears from its primitive seat. In other instances it spreads over a surface of considerable extent, without disappearing from the region where it was first developed, and thus it has, in some rare cases, spread over the whole body. Renauldin has related a case of this kind in a woman fifty years of age, who was, however, speedily cured.

We have seen a similar case at the Hôtel Dieu, but the patient died. The erysipelas was produced by a seton in the back of the neck, and spread thence over the body and limbs, extending to the cellular tissue, and causing large purulent deposits. There is a peculiar variety of erysipelas (*E. erraticum*), which flies from one part to another, leaving no other traces behind it than that of a slight desquamation. We have seen a case in which the eruption appeared first on the left side of the face, where it pursued the regular course; then broke out on the other side in the same manner; it subsequently returned to the part first affected, and so on three different times. It is to this form that the chronic erysipelas of some authors must be referred, to which Frank alludes. When it assumes this character, its duration is lengthened, desquamation not taking place before the end of two or three weeks. Erysipelas is sometimes accompanied with œdema, especially when it attacks the lower extremities, in persons of a soft and lymphatic habit. In these cases the redness is pale, and sometimes scarcely visible. The skin is smooth and shining, and retains the impression of the finger for a considerable time (*E. Œdematodes*). When œdema accom-

panies or precedes erysipelas, the termination of the latter is generally favourable; but when it is consecutive of that disease, it is more dangerous; as, for instance, when it supervenes on anasarca, or from the scarifications necessary to give exit to the serous fluid, it may terminate even in gangrene; and, in the event of this taking place, the inflamed skin assumes a livid or bluish colour. The epidermis is raised in the form of large irregular phlyctenæ, containing a dirty brownish-coloured serum, and death soon ensues, especially in those patients who have been already exhausted by previous disease. When erysipelas results from anasarca, it most frequently occurs on the genital organs, and on the lower extremities.

2. *Erysipelas Phlegmonodes.*—The symptoms of this variety are much more intense than those of the preceding. The inflammation extends much deeper, involving not only the skin, but the whole thickness of the subtegumentary tissues. It may attack any part of the body, but most frequently occurs on the limbs; it is sometimes confined to a particular part, and in other cases spreads over an entire limb. The intensity of the symptoms, however, varies according to the depth of the inflammation, and the anatomical structure of the parts affected. Even when the cellular tissue is not deeply inflamed, there is a high degree of pain, tumefaction, and fever present. The skin is exceedingly painful on pressure, and slowly resumes its morbid colour. It may, in some rare instances, terminate by resolution, about the fifth or sixth day; but in general the pain becomes darting, the redness diminishes, and a number of purulent deposits are formed, which, on being opened, discharge healthy pus, mingled with flakes of gangrenous cellular tissue. When the cellular tissue is deeply inflamed, or when the erysipelatous inflammation spreads over a whole limb, the disease runs its course with great rapidity, and the subcutaneous tissues appear to be inflamed at the same time, or even before the skin itself. The pain is intense in these cases; the slightest movement makes the patient scream with agony; the skin is red, tender, and in a state of exquisite sensibility. The pulse is quick and hard, and the disease is often accompanied with delirium, insatiable thirst, parched tongue, and copious perspirations. This variety scarcely ever terminates by resolution; it usually ends in suppuration between the fifth and seventh days, sometimes sooner, and is

accompanied by wandering chills. The redness and heat of skin subside, but the swelling increases, and the limb has a sort of doughy feel. When the abscesses are opened they discharge pus, and the debris of the subcutaneous tissues, as before mentioned. The disease continues for a considerable time, and the patient, already exhausted by slow fever and suppuration, is run down by colliquative diarrhœa.

Phlegmonous erysipelas may sometimes appear in a still more severe form; as for example, when it occurs on the hands and feet, where the swelling of the parts is prevented by the aponeurotic sheaths. The febrile symptoms are extremely intense in these cases. Violet-coloured patches appear on the inflamed surface about the third or fourth day. The skin loses its sensibility, and the patches are covered with phlyctenæ, which extend rapidly. Eschars form, which are gradually detached, and the disease terminates after copious suppuration. Should this untoward termination take place while the inflammation is diffused, the whole system becomes involved, symptoms of severe gastro-intestinal disturbance set in, and delirium, drowsiness, wandering dreams, and great distortion of the features immediately precede death.

3. *Erysipelas Gangrænosum.*—This variety often occurs in those situations where the aponeurotic sheaths prevent the parts from swelling, producing as it were a kind of strangulation. It is also frequently the result of the scarifications necessary to give exit to the serous fluid in cases of anasarca. It chiefly attacks individuals who have been debilitated by long-continued disease, or whose constitutions have been otherwise broken down. Although the local symptoms are often comparatively mild, in general, however, phlyctenæ form rapidly, and inflammation of the skin soon terminates in gangrene. We have seen a case at the Hospital of St. Louis, in which the skin of both breasts of a female, immediately after delivery, was quickly destroyed. The nipple and the areola round it escaped. We have also seen a case of an old man, whose left foot was attacked with phlegmonous erysipelas, which had been at first mistaken for gout. The skin was hot, thirst great, and pulse frequent. The pain of the foot became very severe. In the course of thirty-six hours from its first appearance, the inflamed surface was covered with blackish phlyctenæ, typhoid symptoms

supervened, and the patient died on the fourth day. On making a post-mortem examination, the femoral artery was found to be obliterated, and ossified to a considerable extent. In another case nearly analogous, which occurred in Biett's ward, the patient recovered under the use of charcoal cataplasms.

There are certain *local* varieties of erysipelas worthy attention, which we shall now briefly describe.

1. *Erysipelas of the face* is by far the most common of them. It generally commences on the nose, the cheeks, or the eyelids, and gradually spreads over the face. The features are greatly distorted, and the eyelids are intensely swollen. It is accompanied by general symptoms, quick pulse, hot skin, violent headache, sleeplessness, wanderings, and slight delirium, during the night. These symptoms are sometimes very intense, in other cases they are scarcely perceptible. The disease is at its height about the fourth or fifth day, and resolution takes place on the eighth.

2. *Erysipelas of the scalp* is rarely confined to that region; it is frequently a continuation of that of the face. In some instances it is the result of punctures, contusions, minor operations, &c. It is, however, occasionally developed on the scalp, and does not extend beyond that region during its progress. MM. Chomel and Blache have related several cases of this kind (*Dict. de Méd.*, 2d *edit.*, *art. Erysipelas*). In this variety the colour is so bright that it may easily be mistaken for some other affection, but it is invariably attended with œdematous swelling and great sensibility of the inflamed skin. It terminates frequently in suppuration, and the subcutaneous cellular tissue often becomes gangrenous without affecting the skin in the slightest. This is explained by the anatomical disposition of the vessels, which, as Dupuytren remarked, ramify in large branches on the internal surface of the *cutis vera*, instead of in the tissue beneath it, as obtains in the extremities. This variety is more frequently attended with cerebral symptoms, which are often very severe, than any of the others.

3. *Erysipelas of the umbilical region* is very frequent in newborn infants at the Foundling and other hospitals. It has been attributed to rough usage of the cord, and to the confined air of these establishments. It sometimes spreads to the hypogastric region,

and even to the genital organs, which often become gangrenous; death is then the inevitable result. Although erysipelas appears most frequently in infants round the umbilicus, it also occurs now and then on the face and limbs. The new-born infant is more liable to this than to any other exanthematous disease. It rarely terminates by resolution or desquamation. Its most frequent terminations are suppuration and gangrene, against which, according to M. Baron, no treatment will be of any avail. M. Baron has observed, that in cases where the disease terminates fatally, it is invariably accompanied with peritonitis. (*Dict. de Med. loc. cit.*)

4. *Erysipelas of the limbs* is often very limited. In other cases it spreads over an entire limb, and terminates by resolution, with the exception of a circumscribed spot or two, which generally suppurate.

The most dangerous complications of erysipelas are cerebral and gastro-intestinal inflammation. The erysipelatous inflammation usually disappears suddenly in these cases, and at the same time the symptoms of the organic lesion become more marked. In some instances, however, it does not disappear. Swelling of the parts is a frequent complication of erysipelas of the face. Erysipelas may terminate in resolution, desquamation, suppuration, gangrene, and death. The first is fortunately the most common. Erysipelas of the face is often preceded by epistaxis.

Autopsy.—A brownish tint replaces the deep red colour of the skin after death. The epidermis peels off with much facility. The subtegumentary tissue is often friable, infiltrated with pus and shreddy. M. Ribes has observed the cutaneous veins to be red and inflamed, and to contain pus. M. Cruveilhier and Dr. Copland corroborate this statement.

Causes.—Erysipelas attacks persons of every age and sex, and appears at all seasons. It occurs, however, most frequently during spring and autumn, and in persons of a fine delicate skin, and sometimes spreads through the hospitals in an epidemic form. It is not contagious, although Lorry was doubtful as to this point.*

[* There is little doubt that certain forms of erysipelas are contagious, especially the epidemic forms met with in hospitals, prisons, &c.—B.]

Local irritants, punctures, a contused wound, a minor operation, &c., often excite this disease. The application of cold may produce erysipelatous inflammation in the form of chilblains. It is, however, in all these cases, often associated with a peculiar state of the constitution, of which we know little. It may also arise from intemperance, putrid or highly-seasoned food, and surfeit. It occasionally appears in a periodic form, as for example, at the menstrual periods, when the discharge is suppressed, or on the suppression of any other habitual discharge. Strong mental emotions and gastric irritation frequently produce erysipelas. When the disease appears in persons who have been long confined in prisons, hospitals, or any ill-ventilated places, it is generally the result of chronic derangement of the digestive organs, and a vitiated state of the blood. It often supervenes during inflammation of the serous membranes or of some of the internal organs; its appearance is then considered salutary. The relation that exists between erysipelas, gout, and rheumatism, in certain constitutions, has been often pointed out by writers on these diseases.

Diagnosis.—The peculiar characters of erysipelas are so well marked that it is difficult to mistake it for any other affection. In cases of erysipelas of the scalp, a careful examination is sometimes necessary, especially when it co-exists with some other severe disease, the symptoms of which are likely to attract or draw off the physician's attention.

Prognosis.—Erysipelas is only dangerous when it is extensively diffused or complicated with inflammation of the brain or of the intestinal canal. When the erratic variety of the disease continues beyond a certain time, danger may also be apprehended. If it supervenes during the progress of anasarca, pleurisy, pneumonia, and gastritis, the prognosis is generally unfavourable. Its sudden disappearance indicates a metastasis to some of the internal or vital organs, and is invariably a bad omen. The prognosis of phlegmonous erysipelas is more serious, and becomes more so in proportion to its extent. Gangrenous erysipelas is always dangerous, especially when accompanied with typhoid symptoms. There are some cases, however, in which the appearance of erysipelas seems to be a salutary turn or crisis of a pre-existing disease; as for instance, when it occurs in gout, rheumatism, &c.; but it is in some of the chronic and rebel-

lious diseases of the skin, as lupus, and certain old scaly eruptions, that the beneficial results of its development, whether natural or excited, are most marked.

Treatment.—When erysipelas is not complicated with any other disease, or when it is confined within a small compass, very simple measures will suffice. Regimen, diluents, quiet, and the horizontal position, are all that is required. Goulard's lotion is very beneficial in the variety called *chilblains*. When the disease spreads, and is accompanied with general symptoms, we must have recourse to bleeding, especially if the patient is young and plethoric, and a general reaction of the system has taken place. Venesection is also highly necessary during the inflammatory fever which precedes the development of the eruption. Bleeding from the arm is more efficacious than from the foot, as a larger quantity of blood can be obtained in a given time; but when the pulse falls, and at the same time the eruption preserves its intense character, local bleeding will be attended with much benefit, especially when the face or scalp is affected. Both local and general bleeding may often be employed together with advantage; but the inflamed surfaces should always be carefully avoided in opening the veins or employing leeches.* To these measures may be added acidulated drinks, laxatives, and regimen. Erysipelas of the head always requires the most energetic and decided measures. Phlebotomy ought to be repeated according to the persistence and urgency of the symptoms. There is, however, an exception to this rule; for example, when the disease appears in persons of weak and broken-down constitutions, no matter how severe the symptoms may be, great caution is necessary in extracting blood from the system. Emetics are often very useful, especially in old persons, and where the digestive organs are free from inflammation, the tongue furred, and a bitter taste in the mouth. They were much employed by Stoll and Dessault, and with good effect in old people. Purgatives sometimes

[* Unless the patient is young and vigorous, and the disease attacks the head and throat severely, the energetic depletory measures here recommended may safely be dispensed with in the treatment of the disease as it appears in this country. Tartarised antimony and calomel will be found safe and effectual substitutes for general and local bleeding in the great majority of cases of erysipelas.—B.]

act very beneficially on the intestinal canal by derivation; laxatives or mild purgatives will generally suffice.

Local applications are seldom useful in the treatment of erysipelas. Cold lotions should in particular be avoided. Blisters may be employed advantageously in fixing to one spot the erratic variety of the disease, or in reproducing the eruption after it has suddenly disappeared. Dr. Higginbottom has cured erysipelas of the face by touching a small surface here and there with the nitrate of silver. This remedy has also been employed to circumscribe the disease, and prevent it from spreading. Biett and Velpeau have adopted the same practice with success. The application of mercurial ointment to the erysipelatous surface has been much recommended by writers in this and in other countries. A very strong mercurial ointment should always be employed, otherwise it will be inefficacious. It ought to be rubbed in gently with the hand every two hours, and for eight or ten minutes at a time, provided that the friction does not excite much pain. The parts are then to be covered with dry linen. Lard has been employed by Velpeau and Lisfranc with some success in cases of slight inflammation of the skin; but mercurial ointment has a peculiar antiphlogistic action in those cases which simple lard has not. When lard is used it should be as fresh as possible. A layer of larded cotton, laid on a piece of thin oilskin, and loosely bound on the affected surface, with a fine compress over it, is a very simple, and often an efficacious topical application. In phlegmonous erysipelas, both local and general bleeding should be resorted to the moment the disease appears. Emollient local baths may also be employed and continued for some time, as much with the view of encouraging the bleeding as of diminishing the inflammation.

If these measures fail, and the disease still advances, we must have recourse to free incisions of the inflamed parts down to the sheaths, with the view of relieving the painful tension of the aponeuroses, of giving exit to the confined matter, and of circumscribing the gangrene. Compression by means of a bandage is not only a useless, but even a dangerous remedy in phlegmonous erysipelas. It may produce gangrene. In erysipelas œdematodes of the legs, however, it is often very useful. Tonics may be employed with advantage in the early stages of this variety. Sulphur fumigations have been recommended in certain varieties of erysipelas. In

gangrenous erysipelas we ought early to have recourse to tonics, some of which should even be applied to the diseased surface. Acidulated drinks, quinine, compresses saturated with aromatic decoctions; and at a later period quinine powders, camphor, flour, and a solution of chloride of lime, in the proportion of a drachm to a quart of water, as topical applications, are indispensably necessary. Biett has employed charcoal poultices in gangrenous erysipelas with great success.

ROSEOLA.

SYN.—*Efflorescentia erysipelatosa; Rosalia; Rosacia: Rubeola spuria;* Rose rash; Anomalous rosy eruption; Surfeit.

Roseola is a mild, transient, non-contagious exanthematous eruption, characterized by deep rose-coloured patches of various size and form, without elevation, and generally preceded and accompanied by febrile symptoms. It may attack the whole surface of the body at once, or, as often happens, be confined to certain regions, as the trunk, the limbs, &c. It is always an acute affection, and its duration varies in general from twenty-four hours to a week.

SYMPTOMS.—1. *Roseola infantilis* occurs in young infants whose stomach and bowels are out of order, or during dentition. It appears in the form of an eruption of numerous deep, rosy-red patches of a circular shape, and from a third to a fourth of an inch in diameter. They are closely crowded together, yet perfectly distinct, and disappear in the course of twenty-four or thirty-six hours. In some instances they vanish and reappear alternately for several days.

2. *Roseola estiva* is the most severe form of this eruption. It is usually preceded by pretty smart febrile symptoms. When it attacks children, slight delirium and even convulsions often supervene. The eruption usually appears between the third and seventh days on the face and neck, whence it spreads, in the space of twenty-four or forty-eight hours, over the rest of the body. The spots are of a deep red colour, more irregular in shape than those of measles, and their original colour soon passes into a bright rosy hue. There is also present a considerable degree of itching and pain, and often difficulty in swallowing. The progress of this affection is very irregular. There is sometimes entire absence of febrile symptoms. It lasts about three or four days, and then disappears without any

evident desquamation; but it sometimes disappears for a time, returns after a short interval, and then vanishes altogether. It sometimes appears epidemically during hot summers. Children and females appear to be most subject to it.

3. *Roseola autumnalis* appears during the autumn in children; the patches are larger than those of the preceding variety, they are seated on the upper extremities, and there is scarcely any fever.

4. *Roseola annulata* appears in the form of distinct rosy rings, in the centre of which the skin retains its natural colour. The rings are at first small, but gradually increase, and two or three may frequently be seen encircling each other. It is principally observed upon the abdomen and lumbar regions, on the buttocks, and along the thighs. The duration of this variety is short when accompanied by fever, but it frequently assumes a chronic form, when it is generally complicated with some derangement of the digestive organs. We have seen two cases in which it co-existed with chronic pericarditis.

Causes.—Roseola appears at all ages and in both sexes, most frequently in women and children, and in summer and autumn than at other seasons. It has sometimes appeared in an epidemic form; it may occur in the same individual several times, and may precede the eruption of small-pox. Dentition, drinking cold fluids when the body is heated, and the pores of the skin open, gastro-intestinal irritation, and severe exercise, are frequent causes of this affection. [Irregularity of the uterine functions is a frequent cause of roseola in females.]

Diagnosis.—Roseola has frequently been confounded with measles and scarlatina. The spots of roseola are nearly circular, and are always circumscribed; they are of a deep rose-colour, larger than those of measles, and smaller than those of scarlatina. The patches of measles are irregularly semilunar, and of a bright red colour; those of scarlatina are large and diffused, and of a raspberry tint. Both these diseases are contagious, and their symptoms are peculiar to themselves. The most experienced physician, however, may mistake them when they first begin to appear. Roseola annulata is distinguished from herpes iris by the absence of vesicles and the large size of its rings. Roseola is always a mild affection.

Treatment.—Roseola does not require any particular treatment.

Rest and antiphlogistic regimen are all that is necessary. When it is symptomatic of another disease, it is towards the latter that the attention should be chiefly directed. [Mild aperients, and sub-acid mixtures, are the most appropriate internal remedies. Cold lotions should not be applied to the face when the eruption attacks that part; although they may give momentary relief, they will aggravate the complaint. The application of tepid water, continued for some time, will be found a more grateful, and more permanent remedy.—B.

MEASLES.

Syn.—*Rubeola; Morbilli; Febris morbillosa.*

Measles is a contagious exanthematous disease accompanied from the beginning with coryza, lachrymation, cough, and fever. It is characterized externally by small red spots, slightly elevated, and distinct at first, but soon becoming confluent, assuming an irregular semilunar form, and leaving small intervals between them where the skin is perfectly sound.

The progress of this disease is always acute; eight or ten days is about the extent of its duration; but some few of the symptoms frequently continue for a longer period. The eruption itself does not last longer than three or four days.

Symptoms.—The invasion of measles is indicated in most cases, by a state of general languor of the system, lassitude, especially in the lower extremities, rigors, followed by heat of skin, bleeding from the nose, and vomiting. These symptoms invariably precede the appearance of the disease for some days, and are then followed by the phenomena peculiar to measles,—frequent pulse, heat of skin, sneezing, coryza, flow of tears, discharge from the nose of clear mucus, frequent dry cough, slight pain, thirst, anorexia, nausea, white and moist tongue, constipation, red and scanty urine [at the commencement of the fever, which becomes dark, of high specific gravity, and frequently deposits uric acid and urate of ammonia at a later stage], headache, drowsiness, and sometimes convulsions when infants are attacked.

These symptoms are developed within the first forty-eight hours; their intensity, as also that of the fever, increases to the third or

fourth day; when they are succeeded by intense heat of skin, perspirations, great sensibility of the conjunctivæ and eyelids, coryza, hoarseness, harassing cough, dyspnœa, redness of the tongue, and occasionally vomiting and slight delirium. At this period the palate and uvula are covered with small red points, which soon become confluent.

About the fourth or fifth day, small, circular red spots, slightly elevated like papulæ, appear on the forehead, chin, nose, and cheeks. Soon after the neck, chest, body, and limbs, are covered successively with a similar eruption. The spots gradually increase in size; they become slightly prominent, and are not unlike flea-bites in appearance. Sometimes a small vesicle may be seen in their centre. They now increase in number, and uniting together form patches of an irregular semilunar appearance, leaving spaces between them in which the skin preserves its natural colour. In some cases, and especially about the hands and face, a sensation of roughness is given to the finger when passed over the eruption. The redness of the spots in general attains its greatest intensity about twenty-four hours after their appearance, and the eruption itself usually terminates in thirty-six hours from that period. About this time the face is greatly swollen, and in some instances the tumefaction of the eyelids is so great as to impede vision. On the sixth day the redness begins to subside on the face, and increases on other parts of the body. About the seventh day the eruption begins to disappear altogether, and on the ninth, slight yellow patches indicate the places which it occupied. The disappearance of the disease, which follows the same order as that of its development, is succeeded by desquamation of the cuticle, generally accompanied by a smart itching. This desquamation, however, is never so great as that which succeeds scarlatina. The heat, thirst, coryza, cough, and other symptoms, instead of subsiding as the eruption advances, are considerably increased; the expectoration is abundant and thick, the sputa have a peculiar character, being round and nummulated, closely resembling the sputa of consumptive patients, but the pulse becomes slower. These phenomena, however, generally cease as soon as the eruption disappears. The cough continues longer than any of the other symptoms mentioned, hæmorrhage from the nose sometimes supervenes at the termination

of the disease, and frequently a slight diarrhœa ensues which appears to hasten the convalescence.

This is the natural course of measles; but in some cases the eruption is scarcely apparent, whilst in others it is unnaturally developed. Sometimes the red colour of the patches is very intense, while, on the contrary, it is scarcely visible in other instances.

Measles may be complicated with a variety of diseases. It may co-exist with variola in the same individual, but the progress of one of these eruptions is, under such circumstances, generally arrested by that of the other. Hunter mentions some curious cases bearing upon this point. It rarely accompanies petechia; but, as Biett has frequently observed, the patches may assume the colour and form of *purpura simplex*, and will no longer disappear under pressure of the finger. The complications which especially demand our attention are the cerebral affections which frequently terminate in effusion of serum into the ventricles; and pulmonary and gastro-intestinal inflammation. It is in these instances that those symptoms called ataxic and adynamic are developed.

Croup is a very dangerous complication of measles; but, fortunately, not a very common one. In short, a variety of eruptions of the vesicular, bullous, and pustular classes, may accompany measles.

Independently of the complications now mentioned, several other diseases may arise during convalescence; as for example, we not unfrequently meet with obstinate chronic ophthalmia, inflammation of the mucous membrane of the air passages, otitis, accompanied with deafness, and chronic inflammation of the lymphatic glands and vessels. In individuals predisposed to phthisis, the development of tubercles appears to be favoured by the continuance of the catarrh consequent upon measles. The convalescence of this affection may also be retarded, as in cases of scarlatina, by the occurrence of acute dropsy; a contingency, however, more frequently occurring in the latter than in the former disease.

In the majority of cases measles pursues a pretty regular course, and terminates favourably; but sometimes the patients sink, and then death is to be attributed to one of the complications of the disease, as in those fatal terminations signs of inflammation, or of organic congestion, are invariably discovered on making a post

mortem examination. The brain, the lungs, and the stomach are the organs most frequently involved.

Causes.—It is pretty generally admitted that measles is the result of an unknown morbid poison, which may be transmitted by contact or by infection, and generally occurs but once in the same individual during life.

There are, however, some cases on record of relapse of measles.* The arguments put forth by writers, with the view to prove that inoculation of the blood of a patient affected with measles into a healthy individual may transmit that disease, are by no means conclusive.†

Measles is not indigenous to any country; it almost invariably prevails in an epidemic form. In some of these epidemics, and in certain cases, coryza and irritation of the pulmonary mucous membrane are the only symptoms developed; and again, in a few rare instances, measles shows itself without any of these phenomena. In the latter cases, however, the patients are not protected from a second attack. No age is exempt from the disease, but young subjects are those most frequently attacked. Infants have been born with the disease. It occurs, however, more frequently after than before the first dentition. It prevails more during the winter, and particularly at the beginning of spring, than at any other season.

The eruption generally appears between the tenth and fourteenth day from the period of infection.

Diagnosis.—The characters and progress of the disease, and the nature of its symptoms, are always sufficient to distinguish measles from scarlatina. In measles, the symptoms of invasion precede the eruption three or four days; the patches are smaller, of a bright red colour, irregularly semilunar, and the skin between them is perfectly healthy. In scarlatina the eruption appears more suddenly, the patches are larger, irregular, and of a raspberry tint. The

[* There is no doubt that measles do occur a second time in the same individual, and the instances of this kind are by no means so rare as is generally supposed.—B.]

[† Several well-authenticated cases of infection by inoculation with the blood are on record. Besides, Dr. Ratona, of Hungary, inoculated 1122 persons with a drop of serum, or of the tears, of patients, and only failed in the proportion of seven per cent.—*British and Foreign Med. Review, July* 1845.—B.]

eruption of scarlatina never disappears in the uniform manner of that of measles; and small irregular patches are observed about the end of the fifth day, which may easily be confounded with those of the latter disease. There are, indeed, some cases in which the diagnosis is really very difficult, as, for example, in those instances where large patches of an uniform red colour cover different parts of the body, and where the symptoms of irritation of the mucous membranes resemble those commonly attendant upon scarlatina. In such cases the prevailing epidemic should be taken into consideration, and the leading symptoms of the disease; the fact of the patient having already had the measles should not deter the physician from making a careful examination, for it is ascertained that the same individual may be affected twice with this eruption. The period of incubation is one week in scarlatina, and two weeks in measles. The eruption is brightest on the parts exposed in measles, and on those covered in scarlatina.

With regard to roseola, the size and deep red colour of the patches, their rounded form, and its non-contagious character, readily distinguish it at a certain period; but when the ordinary symptoms of measles do not appear at the commencement, it may be mistaken for that eruption. In short, the different cutaneous affections with which measles may be complicated, have their own peculiar characters; but it is necessary to remark, that their progress is sometimes very insidious, and requires considerable attention.

Prognosis.—Measles is not in general a severe disease, but may become so in many cases. It is particularly dangerous when attacking pregnant women, or those lately confined, and also in individuals exhausted by previous disease, and in weakly children of lymphatic habit predisposed to bronchial irritation. In forming the prognosis, account should be taken of the general character of the form of the disease then prevailing, of the degree of intensity of the accompanying lesions, and the nature of the organs affected.

The appearance of petechiæ, a premature eruption, its sudden disappearance, followed by a considerable degree of fever and oppression, are unfavourable signs.

Treatment.— The ordinary treatment of measles consists in regimen, repose, a moderately cool temperature, diluents, and muci-

laginous drinks, the inhalation of some emollient vapour, and care to protect the eyes from too strong light.

Emetics will be found very efficacious, if administered at the commencement with the view of relieving the sickness of the stomach, but especially with the view of encouraging the eruption. In some instances the administration of a few grains of ipecacuanha will bring out the eruption almost instantaneously.

When measles is complicated with croup, emetics will be indispensable. The constipation which continues during the first day or two produces no inconvenience; and if it persists when the disease is farther advanced, it may be removed by simple injections.

If the eruption does not come out freely, or if it suddenly disappears, diaphoretics should be administered immediately. The patient is to be put into a warm bath containing mustard, or, still better, into a vapour bath, if it can be conveniently done. But when it is very slow in appearing, and the fever is at the same time increasing, we have reason to fear the development of some internal disease; and in the event of this, it will be necessary to take decided preventive measures at once. We shall now pass in review the therapeutic measures which will best contribute to this end.

General and local bloodletting first command our attention. In having recourse to these remedies, it will be necessary to distinguish clearly the symptoms which naturally accompany the disease from those which depend upon internal inflammation, involving, to a certain extent, the life of the patient. As, for instance, during the eruption of measles there is frequently a good deal of functional disturbance, thoracic pain, severe cough, prostration, and on stethoscopic examination a sub-crepitant râle of more or less intensity is frequently discovered; nevertheless, these alarming symptoms almost invariably disappear spontaneously, as the disease subsides. But, if they continue, recourse must be had, and that promptly, to general and local bloodletting, and the quantity of blood to be drawn must be proportioned to the strength of the patient and the urgency of the symptoms.

When evident signs of pneumonia are present before the appearance of the eruption, or where there are symptoms of gastro-intestinal inflammation, or coma, stertorous breathing, accompanied with a high degree of fever, the disease should not be left to

nature; blood should be drawn freely. In young children the application of leeches to the temples, behind the ears, at the epigastrium, or arms, may be substituted with advantage for phlebotomy. In adults and young subjects it is frequently useful to employ, at the same time, general and local bleeding. It often happens, when blood is drawn under these circumstances, that the eruption appears immediately, and the symptoms become less urgent. The period at which bleeding should be resorted to is highly important; the remedy will be efficacious, in proportion as it is employed early, and at the commencement of the accompanying inflammation. When the different vital organs have been already for some time the seat of congestion, instead of being useful, it may even hasten a fatal termination. In short, the employment of bloodletting is a point of the highest importance; it is to be regarded as a remedy which has for its object the prevention or subjugation of those inflammatory diseases, which, instead of averting the measles, invariably aggravate that disease.*

Purgatives, perhaps, have been too much extolled in the treatment of measles. The gastro-intestinal irritation with which it is so frequently complicated, indicates the necessity of being cautious in employing these remedies. They may, however, produce considerable beneficial effect in cases where meningitis, pneumonia, sorethroat, and croup occur; they should be employed conjointly with bloodletting. The purgatives which we have found most efficacious are manna, senna, calomel, and castor-oil.

About the tenth day, when the diarrhœa generally commences, gentle cathartics and laxatives may be employed with advantage, but when the disease is subsiding they are particularly required.

Blisters and sinapisms should be employed with reserve; they are sometimes beneficial in producing the eruption or hastening its progress.

The application of cold water (cold affusion), when the skin is dry and hot, has been much praised by English practitioners. When

[* Notwithstanding the emphatic manner in which bloodletting is here prescribed, it will not be found necessary in the treatment of measles in this country, unless in cases where the pulmonary symptoms are severe, and pneumonia impending. Indeed, the energetic employment of the lancet would be fatal in many cases, even where "coma and stertorous breathing" are present.—B.]

speaking of the treatment of scarlatina we shall recur to this remedy, which is not, perhaps, so applicable to measles, in consequence of the frequency of its complication with pulmonary inflammation, a circumstance already observed by Guersent.

Tonics, such as wine, bark, quinine, camphor, are only indicated when the pulse is small and feeble, the skin cold, and the eruption pale or livid. They should never be administered in cases where the skin is dry and burning, notwithstanding the appearance of adynamic symptoms.

During convalescence, tepid baths may be employed, but great precaution is necessary to guard against cold or chills. If the cough continues, laxatives, opiates, a blister to the chest, or in each axilla, should be prescribed. Sometimes slight febrile symptoms supervene, and hygienic measures become necessary. In conclusion, in cases of obstinate diarrhœa, opiates, emollients, strict regimen, a blister in each groin, or in the ileo-cœcal region, are the remedial measures most likely to prove beneficial. The prophylactic treatment consists solely in isolation. Since it is not positively ascertained when the contagion ceases, it is prudent to continue this precautionary measure beyond the twenty-fourth day.

SCARLATINA.

SYN.—*Febris scarlatina; Angina erysipelatosa; Rosalia; Purpura scarlatina; Febris anginosa; Morbilli confluentes.*

Scarlatina is another contagious exanthematous disease, appearing in the form of minute red spots, which soon run together, and form broad irregularly-shaped patches of a raspberry colour, which their turn become united, and spread over a large extent of surface, sometimes over the whole body. The eruption appears between the third and sixth day after exposure to contagion, and is preceded and accompanied by general febrile symptoms, and irritation of the mucous membrane of the mouth, larynx, &c.

Symptoms.—1. *Scarlatina simplex* generally sets in suddenly, towards evening, with symptoms of extreme depression, rigors, nausea, vomiting, and pains in the back, loins, and limbs. The pulse is greatly accelerated, beating from 120 to 140 pulsations in a minute, and respiration is hurried and irregular. The body is

hot, whilst the feet are cold; and in some rare cases convulsions supervene about this period. The following day, sometimes earlier, the eruption appears; first on the neck and face, whence it spreads over the whole body in the space of twenty-four hours.

It consists of numerous small red spots so close together that the entire surface of the skin is of a bright red colour, and feels rough to the touch. It is also accompanied with intense heat, and a distressing burning sensation; and the parts upon which the body has been lying are of a bright scarlet or raspberry colour. The colour is equally vivid in the bends of the joints. The tongue, the pharynx, the soft palate, the internal surfaces of the eyelids, the nostrils, and the cheeks, present the same brilliant hue, and deglutition is painful and difficult. The tongue is often red only at its apex and edges, whilst the middle and back part are covered with a whitish fur, through which the inflamed papillæ project, giving the part the appearance of a ripe strawberry. The febrile symptoms sometimes subside on the appearance of the eruption. But they usually continue, as well as the burning thirst, heat, nausea, constipation, and difficulty of breathing. The raspberry tint is always most vivid towards the evening, especially about the third or fourth day. It begins to subside about the fifth, and generally disappears on the seventh, at which period desquamation commences. The foregoing symptoms disappear with the eruption. The redness of the tongue, however, continues, and copious perspirations or diarrhœa often supervene. The urine frequently deposits an abundant thick sediment. The process of desquamation, which may either be of the furfuraceous or lamellated kind, is invariably attended with an insupportable pruritus, and is often prolonged, even for thirty or forty days, and may be renewed several times. This is the mildest form of scarlatina, and may last from eight to ten days.

2. *Scarlatina anginosa* derives its name from the more intense sore throat which accompanies it. All the symptoms are much more aggravated in this variety than in scarlatina simplex. The patient complains from the onset of stiffness of the muscles of the neck and lower jaw. After the second day the tonsils become greatly swollen, the voice is hoarse, deglutition is painful, difficult, and sometimes the liquids attempted to be swallowed are returned by the nostrils. Respiration is painful, and there is a sensation

of suffocating constriction about the throat. There are also great frequency of pulse, intense heat of skin, restlessness, headache, drowsiness, slight delirium, epistaxis, nausea, and often vomiting. The eruption presents nearly the same appearance as that of scarlatina simplex; but it does not always show itself on the second day, and often not until the third. It is also less generally diffused. It appears in the form of broad scarlet patches, irregularly shaped, and scattered over different regions of the body, especially on those parts on which the body rests. The pillars of the soft palate, the tonsils, and pharynx, are sometimes covered with thick mucus, or flocculi of greyish pultaceous matter, which sometimes remain adherent for many days, and in other cases are renewed every twenty-four hours. The tonsils, velum palati, and posterior fauces are occasionally slightly ulcerated. The pultaceous exudations are sometimes rendered of a dark colour by extravasated blood; the tongue and lips often dry and crack, and are covered with black incrustations formed by coagulated blood. These parts are also occasionally slightly ulcerated. The eruption frequently disappears in the course of twenty-four hours, and reappears on other parts of the body at different intervals. The symptoms are not more severe in these cases, but their duration is longer, and desquamation is less regularly accomplished. The sore throat is the most obstinate symptom of this variety.

3. *Scarlatina maligna* is a still more intense form of the disease than either of the foregoing, from which it differs merely in degree; and the eruption, which was mild at the beginning, may soon assume a malignant character. The symptoms are at first the same as those of the preceding variety; but they assume a serious character on the first or second day. The eruption sometimes appears within twenty-four hours, but usually is later in showing itself. There is great depression, burning thirst, intense heat of skin, anxiety, oppression, and vomiting; the pulse full and frequent. The symptoms increase in intensity in the course of a few hours. Restlessness and delirium supervene; the tongue is dried up, the pulse becomes feeble and rapid, the skin is burning, the eyes injected, the cheeks of a dark crimson hue, the breath fœtid, and the tonsils and adjoining parts coated with a blackish exudation. When young children are attacked, the disease is attended with coma, stertorous breathing,

tumefaction of the neck, emprosthotenos, the pulse very rapid, and scarcely perceptible. Intestinal or nasal hæmorrhage, or an eruption of petechiæ supervene in some cases, the extremities become cold, and the patient sinks. The fatal issue sometimes occurs, while the eruption is still vivid and the heat of skin intense. This variety may terminate in a few hours, or be protracted to the end of the third or fourth day. When the disease does not terminate fatally, gastro-intestinal inflammation supervenes, and extensive suppuration takes place in the numerous eschars which form on different parts of the body.

Scarlatina may be complicated with a variety of inflammatory cutaneous diseases. Miliaria, for example, is a very frequent complication. The eruption appears on the chest, neck, shoulders, temples, and scalp, and quickly vanishes again, either by absorption, or by the discharge of the fluid of the vesicles. It is rarely complicated with erysipelas, measles, or variola. Inflammation of the mouth, posterior nares, and pharynx, are the most dangerous, and, unfortunately, the most frequent complications of scarlatina anginosa and scarlatina maligna. Dipthiritis, is, unfortunately, also one of the most serious and frequent complications of scarlatina anginosa and scarlatina maligna. Most of the epidemics of gangrenous anginas described by Fothergill and Huxam were probably instances of this disease, and it is not unreasonable to believe that before the researches of Bretonneau, many cases of dipthiritis were regarded as gangrenous angina. Croup is an exceedingly rare complication ; Biett and Bretonneau had never seen it, and Guersent had seen but one case of the kind. Inflammation of the brain, thoracic viscera, of the mucous membrane of the stomach and bowels, almost always supervene in the intense forms of the disease, as in fact do all the symptoms of typhus, under which the patient rapidly sinks. The partial gangrene which occurs in some cases indicates a state of great exhaustion in the circulation. Amongst the other sequelæ of scarlatina, we may mention abscess of the tonsils, bronchitis, ophthalmia, otitis, and deafness ; inflammation of the parotid and testes in adults, or of the submaxillary and inguinal glands in children. But those which are most to be feared during the convalescence of this disease, are acute anasarca, and effusion into the different splanchnic cavities. Anasarca usually appears about eight or ten

days after the eruption has subsided, and may be partial or general. It occurs much more frequently, and is much more severe in children than in adults, and oftener in winter than in the summer season. The precursory signs are depression, languor, sleeplessness, want of appetite, with quick and hard pulse, hot skin, and scanty and turbid urine. The œdema commences at the eyelids, thence it spreads to the face, the lower extremities, and sometimes over the whole body. It continues for eight or ten days, and when confined to the subcutaneous cellular tissue, is not dangerous. It may be complicated with abdominal pains and diarrhœa. In some rare cases, rapid effusion into the serous cavities takes place, and death soon follows.

Autopsy.—External appearances. In general the skin is studded with large livid red patches, which do not extend deeper than the epidermis. In other instances there is not the slightest trace of any eruption; but in all cases putrefaction takes place rapidly in the tegumentary tissues.—*Internal appearances.* The mouth, the nares, the pharynx, and even the trachea, are red, and covered with a greyish white pultaceous matter. The substance of the brain, and the vessels which ramify on it, are often highly injected. The lungs are sometimes sound, sometimes engorged with blood, and friable; and in other instances the parenchymatous tissue of these organs becomes dense and hypertrophied, of a bright red colour, and torn with difficulty. The mucous membrane of the stomach and bowels generally present a slight red colour, and occasionally a peculiar violet hue; but in a great many cases they are free from every morbid alteration, even when diarrhœa has been a predominant symptom. [With reference to the minute anatomy of the eruption in scarlatina, Gustav. Simon, of Vienna, says the red colour of the skin fades after death, in most cases; the skin then presents no perceptible change or alteration. In some instances, the colour remains after death, and then, according to several writers, the vessels of the cutis are found distended with blood. No other change can be discovered. It is stated by Noirot, that after some days, the epidermis detaches itself more readily from the parts on which the eruption has appeared, than from those where it has not been evolved.—B.]

Causes.—Scarlatina is the result of an unknown contagious prin-

ciple, and occurs more frequently in children and young persons than in any other class of individuals. It is a disease of frequent occurrence at the Children's Hospital, Paris, whilst it rarely appears in the Foundling Hospital. It may appear at any season, but sometimes prevails in an epidemic form in autumn, when there is much rain, succeeded by great heat. All damp situations, where there is not a free circulation of air, predispose to this disease. It appears to be most contagious during the period of desquamation. It never occurs twice in the same person (?)* In some epidemics the constitutional symptoms may appear in certain cases without the eruption, or the eruption without those symptoms.

Diagnosis.—Scarlatina cannot be confounded with measles, if we recollect that in the former the eruption appears ordinarily in the space of twenty-four hours after the first symptoms. The raspberry colour of the eruption, the sore throat, and the peculiar character of the phenomena which accompany scarlatina, will readily distinguish it from that disease. Roseola is sometimes attended with pretty severe sore throat; but the patches are much broader, and the colour is more vivid, in scarlatina. Besides the duration of the former is short and irregular, whilst that of the latter is prolonged, often for a considerable time.

Prognosis.—Scarlatina simplex is not a dangerous disease. The prognosis of the other varieties is much more unfavourable, especially when they occur in pregnant women, or in those newly confined, and when they are accompanied by other severe diseases.

Treatment.—The treatment of the mild forms of scarlatina may be confined to dietetic and slight antiphlogistic measures. A moderately cool temperature, refreshing mucilaginous drinks, acidulated with lemon juice, or any acid, and slightly detergent emollient gargles, are the only remedies required. The constipation which always exists at the commencement, should be obviated by simple injections or laxatives. It is sometimes necessary to prescribe emetics at an early period; however, in general, they produce gastric irritation. Scarlatina anginosa and scarlatina maligna require more energetic measures than the foregoing, especially

[* Recent observation has proved this statement to be erroneous. Scarlatina does occur a second time in the same individual, and by no means so rarely as we have been taught to believe.—B.]

when complicated with organic disease. Bloodletting may be necessary under these circumstances. The repeated application of leeches to the neck, especially when the cervical and submaxillary glands are much swollen, and when the pain is intense, is attended with the most beneficial results. Leeches to the epigastrium are also serviceable in those cases which are accompanied with obstinate vomiting, and violent pain of that region. Venesection may be advantageously employed when the disease assumes a severe character, in strong and vigorous persons. In this case, free bloodletting at the beginning will diminish the intensity of the symptoms. In the early stage of scarlatina maligna it will prevent, to a certain degree, the organic congestion likely to occur in that variety; but at a more advanced period of the disease it will be useless, and even injurious. If symptoms of cerebral congestion should supervene, leeches may be applied to the neck or over the mastoid processes, and as early as possible.

When scarlatina is accompanied with inflammation of any vital organ, early and copious bleeding is indispensable. In malignant sorethroat, acidulated and alum gargles are very beneficial; but in angina membranacea it is necessary to endeavour at once to modify the inflammation by touching the parts with hydrochloric acid, or with nitrate of silver. Biett was in the habit of using equal parts of honey and lemon-juice with much success. A moment should not be lost in having recourse to prompt and decisive measures in the severer forms of this disease. Laxatives and purgatives, conjoined with blood-letting, (?) should be freely employed when there are symptoms of cerebral or pulmonary congestion present. Their use is also indicated when the inflammation of the throat is intense. The physician should not be guided too much by the appearance of the tongue. The scarlet red colour of that organ is but a symptom of the disease. If there is much gastric irritation present, injections should be administered.

Emetics, generally speaking, are only indicated when the pharynx becomes obstructed with pultaceous matter, which occurs chiefly in children. Tepid baths are very beneficial at the decline of the eruption, or when it has suddenly disappeared. Cold affusion is a powerful auxiliary in the treatment of scarlatina. It reduces at once the burning heat of skin, and also the frequency of the

pulse. When it is attended with these happy results, the patient often enjoys a calm and refreshing sleep. In some instances, however, it has no avail, but it is never a dangerous remedy, as has been supposed. In mild cases, it will be sufficient to sponge the parts—the forehead, temples, face, and arms—with cold water, or vinegar and water. The employment of sinapisms, blisters, &c., should be confined to those cases in which it is necessary to establish counter-irritation. The application of a blister to the neck, when the throat is highly inflamed, merely increases the irritation of the skin, without alleviating the internal inflammation—it has even produced gangrene in some instances. During the period of convalescence, the patient requires great attention. Dietetic measures, the frequent use of the tepid bath, and mild laxatives to guard against constipation, constitute the principal treatment required during this period.

The patient should be protected from draughts, or cold air, the usual causes of anasarca. Should that disease, however, appear during convalescence, the patient should be kept quiet, and take light food and warm diaphoretic drinks; and if there is much fever, diarrhœa, or gastric disturbance, leeches must be applied to the anus, or to the epigastric region; it may be arrested in a great measure by the use of the vapour bath. The extract of belladonna has been employed with much success as a prophylactic in scarlatina, and may be used whenever the disease prevails epidemically. The tincture is the most convenient form, and that which seems to be most efficacious. Of this six drops may be given daily to children from eight to ten years of age; the quantity to be increased or diminished according to the age. This remedy ought to be continued for ten or twelve days. It seems to modify the disease, and in some instances it gives immunity from it altogether. The sulphuret of antimony and calomel in combination, have been employed with a similar view, with advantage. The dose for a child from two to four years of age, will be about the sixteenth or eighteenth of a grain of calomel to the same quantity of antimony, mixed with a little sugar or magnesia, which should be repeated three or four times a day.

[Scarlatina is evidently on the increase in this country, judging from the Registrar-General's reports. In 1847, when the disease

prevailed in an epidemic form, 19,816 died of it in England and Wales. Out of a total mortality in London in 1848, of 57,628, there died by scarlatina 4,756. Females are more liable to it than males. In a table published by Dr. Tweedie, in the 'Cyclopedia of Practical Medicine,' of 200 cases, 62 were males and 138 females. It may occur a second time in the same individual: belladonna has been recommended as a prophylactic; but its efficacy is questionable. Three grains of the extract dissolved in an ounce of water, one drop of this solution twice a day to a child under one year, and three drops to a child under twelve years, is recommended by the German writers. Bloodletting should be very sparingly used, and in the simple form of the disease purgatives will answer all the purposes of depletion. The cold affusion, or cold sponging, when the patient is young and robust, are safe and efficacious remedies. In the malignant form of scarlatina, they would be inadmissible. The best preventive of dropsy after scarlatina is the daily use of the warm bath when exfoliation of the skin has commenced, and continued until a healthy diaphoresis is produced. When effusion has taken place, every attention should be directed to the kidneys. Warm baths, regimen, mild aperients, and protection from cold air, are the best preventive remedies for this form of dropsy.* —B.]

URTICARIA.

SYN.—*Essera; Asprctudo; Febris urticata; Exanthema urticatum; Purpura urticata; Papulæ cuticulares; Cnidosis;* Nettle rash.

Urticaria is a non-contagious exanthematous affection characterized by irregularly-shaped prominent patches or wheals of various sizes, sometimes paler, sometimes redder than the surrounding skin, in general extremely transient, and always accompanied with a very annoying itching. Urticaria is sometimes an acute affection, but in the majority of cases it assumes a chronic form, and its duration varies from two or three days to as many months and years. The patches sometimes disappear almost immediately after their formation: more frequently, in the course of twenty-four hours, and in some rare instances they have continued for a week or fortnight.

Causes.—Nettle rash attacks individuals of all ages, and both

* See Lectures on Eruptive Fevers, by Dr. G. Gregory.

sexes, but children and young persons of either sex, of a nervous and sanguineous temperament, appear to be more subject to it than any others. It prevails more during spring and summer than in autumn and winter; yet it is sometimes produced by cold. Urticaria is one of the few cutaneous eruptions which can be traced distinctly to its source. It is well known to result from handling the leaves of the *urtica dioica*, but this is a local and evanescent form; from the ingestion of certain kinds of food, shell-fish of different kinds, as lobster, shrimp, crab, muscle, smoked, dried, and salt fish. The effect in these cases has been attributed to putrefaction of those articles of food; but of several who may partake of them, a single person is often only affected. There must be some peculiar predisposition, and this is sometimes so marked, that some individuals cannot eat of these articles without suffering from urticaria. Bitter almonds, mushrooms, cucumbers, salad, and even oatmeal, vinegar, honey, and certain medicines, such as turpentine, balsam copaiba, valerian, also produce this disease. Indeed some individuals are so susceptible, that the slightest pinching or rubbing of the skin is immediately followed by the eruption of a prominent itching wheal. It sometimes results from derangement of the digestive organs, rheumatism, fever, dentition, and mental emotion. It may co-exist with lichen simplex, erythema, and roseola. The progress of urticaria is very irregular; sometimes attended by constitutional symptoms, in other cases without them; sometimes disappearing and returning several times, and thus may prolong its duration for weeks and even for years. Urticaria has been divided into several varieties according to the nature and progress of the symptoms. We shall describe the three following.

1. *Urticaria febrilis.*—This is the most common and striking form of the disease. It is preceded for a day or two by slight febrile symptoms and pain at the epigastrium; a hot tingling sensation in the skin then ensues, after which the eruption begins to appear over the whole of the body, but especially on the shoulders, loins, the inner surface of the arms and thighs, and around the knees, in the form of long, red or pale, raised blotches of irregular shape, surrounded with a bright red or scarlet border; they are hard round the edges, and of variable extent. Sometimes these wheals are very numerous; they coalesce in many places, and give

the limb a swollen and bright red appearance. (*Urticaria conferta* of Willan.) An almost insupportable smarting and itching sensation accompanies the eruption, which prevents the patient from sleeping, and is greatly aggravated by the heat of the bed. This pruritus is much more severe in some parts than in others, especially about the scrotum. The eruption does not continue throughout the disease, which lasts seven or eight days. The wheals appear and disappear several times, on different parts of the body. They usually return in the evening, accompanied with a slight acceleration of the pulse, and are often reproduced by the patient scratching the parts. They sometimes disappear in a few minutes, in other instances they continue for several hours. In some cases of less frequent occurrence the wheals remain two or three weeks. (*Urticaria perstans*, *Willan.*) Depression of spirits, anorexia, fever, and more or less gastric disturbance, continue during the attack; at length the symptoms gradually decline, the eruption follows, and nothing remains but a slight itching; but when the eruption has been violent, slight desquamation of the cuticle takes place.

This variety occasionally presents all the symptoms of intermittent fever, coming on in regular paroxysms, entirely disappearing with the fever, and returning with it the following day. It often appears to depend on some pathological condition of the liver. We have several times observed the blotches assume a distinct jaundice colour. The itching is insupportable in these cases. The patient, soon after partaking of some of the above-mentioned substances, experiences pain at the pit of the stomach, vertigo, nausea, and general depression; the skin becomes hot, and the eruption breaks out. The symptoms are nearly the same as those already enumerated, only that in the latter instance vomiting and diarrhœa frequently supervene. The eruption is more diffused, and the wheals become confluent, producing considerable stiffness and tumefaction of the parts affected. When they are complicated with erythematous patches, as sometimes is the case, desquamation frequently occurs. The disease generally subsides in the course of a day or two; in some rare instances it has terminated fatally; but this event is more to be attributed to the pernicious effects of the exciting cause, than to the violence of the disease when established. In these cases the eruption may appear in a few hours, or not until the next day.

2. *Urticaria evanida* is a chronic form of the disease. The eruption appears at irregular intervals, sometimes on one part, sometimes on another. It is unattended with fever, and generally disappears in the course of a few hours. The wheals resemble the marks produced on the skin by flagellation; they are not surrounded with an inflammatory border, and are only accompanied with a smart itching. This variety continues for several months, sometimes for years. Biett has seen it last seven years. This form occurs most frequently in females and in persons of delicate and irritable skin. It generally depends on chronic derangement of the digestive organs, especially of the stomach; but it also attacks the most healthy subjects. *Urticaria subcutanea* is a very rare variety, and is characterized by violent acute pricking pain, as if a needle were thrust into the skin. Slight red spots, scarcely elevated, are scattered here and there, but there is no regular eruption. Deep mental emotions, and sudden change of temperature, seem to be its chief exciting causes.

3. *Urticaria tuberosa.* This is also a rare variety, and exhibits characters of great severity. Instead of slightly-prominent blotches, we find broad, hard, deep-seated, and painful tuberosities, which impede motion. It appears chiefly about the extremities and lumbar regions towards evening and at night, and disappears entirely the next day, leaving the patient fatigued, weak, and greatly depressed. We have seen it at the Hospital of St. Louis accompany a quotidian intermittent. It had lasted for four years in this case, and the eruption appearing about the face, throat, and chest, occasioned great swelling and puffiness of the features, accompanied with so much dyspnœa and irregular action of the heart, that the patient became blue in the face, and would have perished, but that we had recourse to copious venesection. It was at length cured by Biett with Fowler's solution. This variety generally occurs in intemperate persons, and continues several months.

Diagnosis.—The form and elevation of the blotches, the itching, and the fugitive character of the eruption, will readily distinguish urticaria from the rest of the exanthematous eruptions. In *lichen urticatus*, which may be mistaken for urticaria, the papulæ are rounded, less prominent, less extensive, harder under the finger, and of a much deeper colour. They never disappear suddenly;

and, moreover, we may always detect, in the vicinity of the spots, a number of true papulæ, which will distinguish it at once. Urticaria tuberosa may be always distinguished from *erythema nodosum* by the regular and continuous course of the latter. Finally, the different varieties of urticaria are often complicated with erythema, roseola, impetigo and lichen.

Treatment.—When urticaria is the result of direct and evident causes, it requires scarcely any treatment. If the eruption should not disappear quickly, acidulated local applications, diluents, and a few tepid baths are all that are required. To allay the smarting and itching, acetate of lead lotions, mixed with a solution of carbonate of potass, or alkaline baths, will be found most efficacious. Mild purgatives are often useful; but when the eruption is produced by some irritating food, vomiting should be immediately excited, if it has not already occurred, after which strong acidulated drinks ought to be administered, (half a drachm of sulphuric acid to a pint of barley water or sugar water,) and, every half hour, from thirty to forty drops of ether on a small piece of sugar. When it assumes a chronic form, great attention must be paid to diet, with the view of ascertaining and avoiding the particular kind of food which excites the disease. It is sometimes necessary to change the habits of the patient altogether. General bleeding, or the application of leeches to the anus in young plethoric subjects, and in females with menstrual derangement, will often be attended with advantage. In obstinate cases alkaline or vapour baths, or the vapour douche, will be found very efficacious. Acidulated drinks and mild laxatives should be conjoined with the foregoing remedies. When urticaria assumes an intermittent character, bark or quinine must be prescribed, and, if these fail, much benefit may be derived from Fowler's solution, in small and repeated doses.

[The chronic form of urticaria is a good illustration of the symptomatic nature of certain cutaneous affections. Here, at all events, we can distinctly trace cause and effect. Certain substances are taken into the stomach, and an eruption of this kind immediately follows. Every article will not produce the same effect. Abstinence from those particular articles, whether of diet or medicine, is a sure prophylactic, and a rational indication in the treatment. This, however,

is but one step towards the elucidation of the pathology of the complaint. The idiosyncrasy which favours its production we cannot unravel. Dr. Maclagan, of Edinburgh, analyzed the urine of a patient suffering from chronic urticaria. It was of a pale straw colour, free from deposit, specific gravity 1010. The urea and uric acid were deficient, the inorganic salts in excess. He attributes these deviations from health to the "want of the products of transformation of the tissues;" and he observes, "the retention in this way in the system, of matters which ought to be eliminated from it, might be the cause of the cutaneous irritation, especially occurring, as it did, after meals." After using the tincture of the seeds of colchicum for a fortnight, this patient's urine increased to 1029·9, and its constituent parts resumed their natural proportions.*

When the itching is severe, the best local applications are the hydrocyanic acid lotion (see Formulary), vinegar and water, or bicarbonate of potash lotion; but the chief prophylactic treatment consists in regulating the diet and regimen.—B.]

* *Monthly Journal of Medical Science*, August, 1846.

VESICULÆ.*

VESICULAR ERUPTIONS.

The diseases which belong to this order are characterized by small elevations of the cuticle, formed by the collection of a transparent serous fluid. These cuticular elevations are called vesicles. In general, the fluid contained in these vesicles readily loses its transparency, and assumes an opaline or yellowish tint. The serosity may be re-absorbed into the system, but it is more frequently effused upon the surface, where it forms at first whitish scales, and, subsequently, thin yellow and lamellated incrustations.

The description of the vesicular affections naturally follows that of the exanthematous diseases, in which the inflammation merely produces injection of the capillary vessels; whilst, in all cases of vesicles and bullæ, the inflammatory process is followed by effusion. In certain exanthematous affections, as measles, scarlatina, and erysipelas, nothing is more common than to meet with partial elevations of the epidermis, on the inflamed surfaces, containing a transparent fluid; in short, true vesicles. It is very probable that in these particular cases the local irritation becomes more intense where the vesicles appear than elsewhere, and that the serous effusion is the natural result of this condition. The very small size of some vesicles, as those of sudamina and eczema, has led to the belief that they occupy the extremity of the vessels through which perspiration is excreted (the sweat ducts). Late anatomical researches, as well as some recent clinical observations, appear to confirm this view.

The vesiculæ, like the pustular diseases, are naturally divided into two classes—those with an inflamed base, and those unaccompanied

[* The Bullæ might, with all propriety, be included in this class of cutaneous diseases. There is no anatomical distinction in the elements of either complaints. A bulla is simply an enlarged vesicle, and nothing more.—B.]

by inflammation. (*Phlyzacia* and *Psydracia.*) Sometimes red, hard, elevated, and circumscribed spots, precede the formation of vesicles for a day or two. Again, on the contrary, the vesicles appear abruptly, and the serous effusion apparently takes place as soon as the skin becomes infected with the morbid virus. Varicella, vaccinia, herpes, and the itch, belong to the first variety. The sudamina, eczema, and some of the bullæ, which differ from the vesiculæ merely in their size, form the second division. The vesiculæ, considered independently of the diseases with which they may be complicated, invariably pursue an acute course. The duration of the vesicles is always brief, but some of these affections continue longer than others, as, for example, the progress of varicella, sudamina, and, generally speaking, of herpes, is essentially acute; whilst, on the other hand, eczema and the itch, although they sometimes may follow an opposite course, are usually chronic affections.

Symptoms.—These diseases are sometimes preceded by general febrile symptoms, but they frequently appear almost imperceptibly, and without any accompanying phenomena, except a slight degree of itching. Occasionally they appear on a red and inflamed surface, but they are as often present without the slightest traces of inflammation. At one time they are small, pointed, or globose; again, they are large, projecting, and irregular, or considerably flattened. In some cases they appear in a scattered form, in others they are agglomerated, forming large patches containing a multitude of small silvery whitish points. This appearance is particularly striking in certain cases of sudamina. The vesiculæ not unfrequently assume an irregularly circumscribed form. Frequently, as in cases of herpes, for example, they form semicircular patches, or even perfect rings.

The serum of the vesicles is usually transparent at its first formation; so much so, that it resembles drops of water scattered over the surface of the skin. By degrees this fluid becomes opaque; it is sometimes re-absorbed, but most frequently it dries into thin scaly and friable crusts. Occasionally these scaly incrustations disappear, and leave behind them a dry but red surface. At other times new incrustations are formed on the same spot by the drying up of the fluid which exudes from the inflamed surfaces. When vesicular eruptions succeed each other, those parts of the skin

where they were situated become thickened, and rough to the touch. When the disease assumes a chronic form, the incrustations are whiter, thinner, and very nearly approach the true squamæ. The slightly thickened and lamellated form of the crusts of the vesicular eruptions demands especial attention, as they furnish the best means of distinguishing vesicles from certain other cutaneous affections. The laminated or squamous form of the crusts is particularly evident in eczema. In general the vesicles gradually disappear without leaving any traces behind; they are sometimes succeeded by small scars, as seen in varicella; they may terminate in genuine cicatrices. The vesicles of herpes are succeeded by a slight ulceration, terminating in a more or less marked cicatrix.

Seat.—Vesicular eruptions may attack every part of the cutaneous surface; they frequently cover the whole body, as, for instance, varicella, miliaria, and sometimes eczema. Even the itch in some cases simultaneously affects the whole of the cuticular surface. Generally speaking, however, eczema, herpes, and the itch, are confined to certain regions clearly circumscribed. Besides, the itch usually attacks the hands and fingers, and the folds of the joints where the skin is thin and delicate. Herpes, on the other hand, attacks the trunk and face.

Causes.—The itch is the only one amongst the vesicular eruptions that is decidedly contagious. Some writers have asserted that varicella is also produced by contagion, and that it may be propagated by inoculation; but there is not sufficient evidence to prove the correctness of this statement. They attribute this affection to a certain varioloid contagion, modified by the constitution of the individual. It generally assumes an epidemic character, and prevails most frequently in the early months of the year. Eczema also prevails at this season more than at any other. Everything that tends to excite the circulation and the functions of the skin may occasionally produce some of the vesicular eruptions, as sudamina, eczema, and herpes. Eczema may sometimes depend on external causes, such as irritation applied directly to the skin, a burn, or the application of a blister.*

[* Derangement of the digestive and uterine functions may produce the vesicular eruptions. Herpes labialis is a frequent result of disorder of the stomach; and eczema of the labia, from acrid uterine discharge.—B.]

Diagnosis.—The presence of vesicles, independently of the characteristic symptoms of each variety of these affections, will always be sufficient to prevent any mistake in the diagnosis. There are some vesicular eruptions which at first sight may appear to be easily confounded with pustular eruptions, but the diagnosis can readily be cleared up, by bearing in mind that the former invariably commence with vesicles, which, on losing their transparency, never contain any other than a sero-purulent fluid. Moreover, some of the vesicles preserve their transparency all along. The scaly crusts which the vesicles leave behind them afford a still more valuable means of ascertaining the nature of the primary affection. The sero-purulent fluid of vesicles invariably terminates in thin laminated scaly incrustations; whilst pustular eruptions usually terminate in collections of true pus, accompanied by a considerable degree of inflammation, and, instead of thin crusts, they give rise to thick rough scabs adhering firmly to the surface of the skin.

Prognosis.—The vesicular eruptions, generally speaking, are not dangerous; they never terminate fatally; nevertheless they should not be regarded too lightly. Chronic eczema, in particular, may lead one astray in the prognosis, as to its probable duration. It requires some tact and observation to be able to give a correct opinion on this point.

Treatment.—When these affections assume an acute form, an antiphlogistic treatment will be necessary. When they are chronic they require particular remedies, and frequently active treatment; which, however, they are often enabled to resist for a considerable period.

MILIARIA.

SYN.—*Sudamina; Febris miliaris; Purpura alba; Purpura rubra; Papula sudoris;* Millet-seed rash.

Miliaria is characterized by an eruption of vesicles which seldom exceed the size of a millet seed. These vesicles spread in considerable numbers over a large surface, and are generally symptomatic of some more serious disease, most commonly of fever.

The miliary eruption frequently forms a very important phenomenon in the progress and symptoms of the disease; as, for example, in the epidemic miliary fever. In some instances, however, it is of little value as a means of diagnosis, and the

physician cannot form any decided opinion from its presence. Thus, miliary eruptions often precede variola and measles, and are present in the last stages of typhoid fevers, and in other diseases in which the serous membranes are more or less involved. It is in the last-named cases that the name of *sudamina* is particularly applicable, whilst that of *miliaria* belongs especially to the severe affection so well described by Sydenham under the name of miliary fever.

Causes.—The miliary epidemic generally attacks adults of a lymphatic or sanguineo-lymphatic temperament. Women are more subject to it than men. The existence of miliaria as a distinct fever, belonging to the same class as variola, measles, and scarlatina, has been often doubted by writers, especially by Willan and Bateman. These authors also attribute the appearance of sudamina, in cases of puerperal and typhoid fevers, to the hot stimulating treatment to which the patients were subjected. The miliary fever of Sydenham, and the miliary sweat of other writers, deserve, in our opinion, a special place among skin diseases. If a stimulating treatment may be considered as the accidental cause of the eruption in some instances, we have had, on the other hand, frequent opportunities of observing that the most rigid antiphlogistic measures could not prevent its development. This observation applies in particular to the sudamina of puerperal fever, scarlatina, and typhoid fever. The eruption generally follows irritation of the skin or copious perspirations. It prevails mostly during dry warm weather in the summer season. Miliaria accompanies many gastro-intestinal affections, and generally appears during a paroxysm. It frequently attends puerperal fever, especially when several of the serous membranes are involved. It is also developed in meningitis, in certain cases of rheumatism, and not unfrequently in scarlatina and measles. In general, miliaria may be considered, as we have before observed, to be symptomatic of some other important affection; but there are cases in which it assumes an idiopathic form, as, for example, when it appears in healthy subjects after violent exercise in warm weather; in these instances it is generally accompanied with copious perspirations. The eruption is then attended with a disagreeable sensation of heat and itching. The number of vesicles is sometimes very

considerable, but they are ephemeral, and disappear in the space of twenty-four hours.

Progress and *symptoms.*—The miliary eruption is preceded and accompanied by peculiar symptoms, which invest it with a special character; these are a remarkable degree of depression, accompanied with fever, perspiration, and a tendency to fainting. The patient complains of a painful constriction of the thorax, respiration becomes difficult, the pulse is soft, and often assumes a very remarkable intermittent character. These premonitory symptoms appear three, four, and even eight days before the eruption; and the disease is generally prolonged by successive eruptions for ten or fourteen days. Miliaria has this peculiarity, that the violence of the early symptoms, and the oppression of which the patient complains so much, receive but little alleviation from the appearance of the eruption.

The vesicles appear principally on the trunk, and especially on the thorax and neck, either behind or before; after these the limbs are the parts most frequently affected. It seldom appears on the face. The eruption is almost invariably confined to a certain circumscribed spot; it rarely spreads over the body.

The miliary vesicles usually appear in patches of more or less extent, or else they are grouped together. Sometimes they become confluent, and then constitute genuine bullæ, which, although small, form a striking contrast with the rest of the eruption. They vary much in number; a considerable part of the body may be covered with them, or they may only be scattered here and there, over certain regions. The vesicles are at first small, prominent, and so transparent, that the fluid which they contain appears as if it was scattered over the skin, like so many drops of clear water or of perspiration. At a more advanced stage they become globular, and the fluid assumes a milky colour, and loses its transparency. Sometimes the seat of the vesicles assumes a deep erythematous red colour, which may be seen through them. (*Miliaria rubra.*) When the limpid serum is replaced by the milky fluid already mentioned, the vesicles which cover this red surface present a singular pearly appearance. (*Miliaria alba.*) This is very remarkable in scarlatina, where a great number of vesicles are spread over large surfaces of a deep raspberry colour.

If the vesicles are not interfered with, they will terminate invariably by resolution, and will never leave scars behind them. They frequently occasion considerable exfoliation of the epidermis, which, however, is often confined to the exact spots occupied by the vesicles.

In epidemic miliaria the danger does not subside with the appearance of the eruption; symptoms of inflammation of the mucous membrane of the air-passages and bowels frequently continue with considerable intensity, and are generally accompanied with important lesions of the brain and lungs. The real danger in this affection consists in the diseases accompanying it, of which the eruption may be regarded as symptomatic. However, the appearance of the vesicles should not be considered as altogether without importance, for many cases occur in which their absence or sudden disappearance is followed by fatal terminations. These untoward results do not always depend on physical causes, as cold, shiverings, injudicious regimen, &c., but they may even be suddenly produced by strong mental emotions. When this eruption accompanies other diseases its physical characters do not change, but its duration is very variable; it does not, generally speaking, continue longer than twenty-four hours, nor does it, during its course, seem to affect the original disease in the slightest degree. The miliary vesicles, as already observed, always terminate by resolution. The idiopathic form terminates in sweating or miliary fever about the third or fourth week.

Diagnosis.—Eczema is the only affection with which miliaria could be confounded. The rapid progress and short duration of the latter, form, however, an important difference between them. Besides, in eczema the vesicles are confluent, and a multitude of them may be seen crowded and agglomerated together in a small circumscribed space; whilst in miliaria the vesicles are almost always isolated, and much larger than the vesicles of eczema.

Is there any difference between the vesicles of miliaria and these of sudamina? M. Barbie says, that "miliaria usually commences in small red spots, sometimes very numerous, and invariably accompanied with itching, and even severe smarting. That the shape of the vesicle is conical, and the fluid they contain is opaque and purulent. That sudamina, on the contrary, are never preceded by

redness or itching, but appear suddenly, and are of a globular form." These characters are not sufficient to form a distinction. Both names belong to one and the same vesicular affection. The precursory symptoms of miliaria may sometimes lead the physician to believe that variola, scarlatina, or measles is about to be developed. It is by comparing the premonitory symptoms of these diseases with those of the one under consideration that this error can be avoided. The vomiting and pains of the limbs, so marked during the invasion of variola, are never present; neither do we meet with the coryza, ophthalmia, and bronchial catarrh of measles, nor the sorethroat of scarlatina. The pathognomonic symptoms of miliaria are the extreme depression, with tendency to sweating and syncope, remarkable constriction of the chest; and, above all, a peculiar state of the pulse, which is soft, frequent, and intermitting.

Prognosis.—Epidemic miliaria is the only dangerous form of the disease. The vesicular eruption does not of itself present any danger as a complication of other diseases; it merely announces a state of general constitutional excitement, and farther than this it is of little importance.

Treatment.—The vesicular eruption does not require any particular treatment. It is the original disease that the physician should attack; and, in the majority of cases, a cooling and antiphlogistic plan of treatment will be found most efficacious, as cold acidulated drinks and aperients. The treatment of miliary fever is the same; but when any of the viscera become involved, more active measures must be resorted to. Mild diaphoretics—the preparations of antimony, &c., have been employed with much benefit.

VARICELLA.

SYN.—*Variola spuria; Pemphigus Varioloides;* the Chicken-pox; the Swine-pox; Hives.

Varicella is a non-contagious disease,* characterized by an eruption of vesicles, at first transparent, but finally becoming opaque, which are preceded and accompanied by febrile symptoms, and ter-

[* Varicella is regarded as an essentially contagious eruption in this country.—B.]

minate between the fifth and eighth day. Formerly varicella was considered to be merely a variety of small-pox; but Heberden proved it to be a distinct affection, differing from variola in its causes, symptoms, and duration. With the introduction of vaccination new difficulties arose, from the appearance of a new species of varioloid disease, bearing a close resemblance to varicella. The disputes respecting the nature of varicella continue to the present day, but it still appears to us right to retain it amongst the vesicular eruptions, and to describe it as a distinct affection from variola.

There are two varieties of varicella. In the first the vesicles are small, but slightly elevated, and contain a colourless fluid (*Chicken-pox.*) In the other the vesicles are large, globular, soft, and broader in the circumference than at the base. The fluid is at first transparent, but finally assumes a milky appearance (*Swine-pox.*) Both varieties may appear at different periods with the same symptoms, whether they occur previous to or after variola or vaccination. It is erroneous to suppose that they cannot prevail epidemically without variola. We have frequently seen varicellous epidemics, especially in boarding-schools, without observing a single case of variola. In general the disease only attacks persons once during their lives. It is, however, in some instances developed several times in the same individual. It is chiefly observed in young persons, although adults are not exempt from its attacks.

Symptoms.—Varicella is preceded for a day or two by general indisposition, languor, thirst, anorexia, and constipation. There is frequently nausea, vomiting, pain at the epigastrium, hot skin, flushed face, quick pulse, and a tendency to perspiration. These symptoms may be more or less severe, but they generally continue for two or three days after the appearance of the eruption, which generally commences on the trunk, more rarely on the face, and continues to appear in fresh places for several successive days.

1. *Varicella lenticularis*, or chicken-pox, first appears in small, red, irregularly rounded, elevations, at the centre of which minute transparent vesicles are quickly formed. These vesicles increase gradually for two or three days. Some are acuminated, others flattened. About the second or third day the serous fluid has a milky appearance; there is much itching, and the vesicles become shrivelled and faded. On the fourth day they are surrounded with

red areolæ. Desiccation commences on the fifth, and on the sixth they are succeeded by small brownish scaly incrustations. These thin scabs dry from the circumference towards the centre, and fall off towards the ninth or tenth day. As the vesicles appear in succession for two or three days, the different stages of the eruption may be seen at once in the same individual, and the duration of the disease may thus be prolonged until the eleventh or twelfth day.

2. *Varicella globata*, or swine pox (Hives—Willan,) is preceded by the same symptoms, and developed in a similar manner. The red spots are quickly replaced by large vesicles, containing a transparent fluid, which becomes opaque about the second day of the eruption. The vesicles have then attained their greatest size; they are soft and flabby to the touch, of a pearly white colour, larger in circumference than at the base, and surrounded by an inflammatory areola. About the third day the vesicles become faded and wrinkled, the contained fluid is thicker, and changed into a yellow colour. As the itching is generally pretty smart, the patients, particularly when children, tear the vesicles, in consequence of which the inflammation is increased, and a thick yellow pus formed. This accident occurs most frequently on the face. The scabs which replace these pustules continue for some time, and leave small pits or scars. This occurrence may also happen in the former variety. The vesicles are replaced about the fourth day by small laminated brownish crusts. These desiccate from the circumference towards the centre, and fall off in about four or five days, leaving small red spots, which gradually disappear.

Diagnosis.—It is very easy to distinguish varicella from well-marked small-pox, of the distinct kind, by the regular progress and gradual development of the variolous pustule; but it is not so easily distinguished from modified variola. However, in the latter disease the precursory symptoms are very severe, amongst which pain in the loins is especially remarkable, which never occurs in varicella. In modified variola the pustules are small, circular, and generally depressed in the centre. Frequently after the desiccation of the scaly crusts, small tubercles appear, which subside very slowly. In varicella the vesicles are at first transparent, but subsequently contain a sero-purulent fluid. They are never succeeded by small tubercles, as in modified small-pox.

We may add, that varicella is not, in our opinion, a contagious disease, (?) whilst modified small-pox may be transmitted by inoculation, and may even in some instances excite a severe form of variola.*

Treatment.—The treatment of varicella is very simple. The patient should be kept in bed, in a room of moderate temperature. Regimen, cooling and refreshing drinks, and a mild aperient now and then, are all the remedial measures necessary even in the severest form of the eruption.

ECZEMA.

SYN.—*Herpes miliaris; Lichen ferox; Scabies miliaris; Crusta lactea; Dartre Squammeuse humide.* Humid Tetter; Running Scall.

The term eczema, (from the Greek ἐκζέω, (*efferresco*,) was first adopted by Willan to designate one of the vesicular eruptions. This affection is characterized by an eruption of small vesicles on various parts of the skin, closely crowded together, and frequently occupying broad irregularly-defined patches.

Eczema may appear under different forms, according to the condition on which it depends. It was, no doubt, owing to this circumstance, that Willan divided it into three varieties—*Eczema solare, Eczema impetiginodes, and Eczema rubrum.* Biett had been in the habit, for many years, of describing it in his clinical lectures under two forms, the *acute* and *chronic*, and we shall now adopt his method.

Acute Eczema.—Under this division we shall class, 1st, *Eczema simplex*, which from the mild course it pursues, constitutes a perfectly distinct variety, but very different from the chronic eczema, which succeeds the acute form of disease. 2nd, *Eczema rubrum;* 3rd, *Eczema impetiginodes.*

1. *Eczema simplex.*—This variety appears in the form of minute vesicles, crowded together on different parts of the skin, and is un-

[* The authors dispute the accuracy of the views of Dr. John Thomson and others, as to the identity of varioloid and varicella with variola. The reader will find this part of the subject fully discussed in Dr. Gregory's work on the Eruptive Fevers.—B.]

attended by inflammation. It appears without the slightest precursory symptoms; the patient feels a slight itching sensation, and is surprised to find it produced by an eruption of more or less extent. The vesicles are very numerous, set close together, transparent, small, indolent, and present a shining appearance; the fluid which they contain becomes turbid and opaque, it is soon after absorbed, the vesicle desquamates, or else it bursts, and forms a small, thin, scaly disc, which soon becomes detached. This variety never terminates in the inflamed patches, serous exudation, or in the reappearance of the thin crusts observed in the other forms. It never leaves the slightest trace behind. It pursues a mild course, and is usually prolonged by successive eruptions, and generally lasts for one, two, or three weeks, sometimes even longer than this. Eczema simplex may become general, but it is more frequently confined to certain regions. Amongst other places, it is observed frequently on the arm and forearm, and between the fingers, where it sometimes fixes itself, and very much resembles itch. It is never accompanied by any other symptoms than that of itching, which is often very troublesome, especially when the eruption is general.

This variety of eczema most frequently attacks young people, and females in particular. It is often produced by friction, and the application of irritating lotions and ointments. We frequently see it in individuals whose business compels them to remain long exposed to intense heat, near stoves, furnaces, &c. Finally, it occasionally occurs without any appreciable cause; thus, for instance, it frequently appears between the fingers of women during child-bed. It is a mild affection, unaccompanied by febrile symptoms; it is sometimes complicated with lichen, and frequently with itch; resulting, in the latter instance, from the use of the sulphur and other irritating ointments. In the majority of cases, eczema appears in a much more acute form than the foregoing, and presents two other perfectly distinct varieties.

2. *Eczema rubrum.* In this variety the eruption is accompanied with considerable heat and tension, the skin is inflamed, and assumes a bright red colour; if it is closely examined, it will be found to be prickly, and covered with small, prominent, silvery-looking points, which at a more advanced period become true vesicles,

and when fully developed, are about the size and form of a pin's head, transparent, and surrounded with a well-marked inflammatory areola.

About the sixth or eighth day, sometimes earlier, the redness diminishes, the fluid becomes absorbed, the vesicles die away, and the disease terminates in a slight exfoliation, produced by the debris of the vesicles. If the eruption be examined at this period, it will be found still to present certain well-marked characters. It presents a reddish surface, which lasts for some days after the vesicles have disappeared—scattered over with small round spots, surrounded with a whitish border, with ragged edges, which indicate the line of demarcation between the elevation of the epidermis that forms the vesicle, and the areola that surrounds its base.

Eczema rubrum does not always terminate in so mild a manner. Instead of subsiding, the inflammation may persist, or even become augmented: the vessels become confluent, burst, and give exit to the fluid, which was at first transparent, but is now perfectly opaque. This fluid flows over an already irritated and inflamed surface, and produces slight excoriations, whence issues a serous effusion more or less abundant. However, this serosity soon diminishes. It becomes thickened, concretes, and forms thin, soft, and sometimes very broad incrustations, which are frequently renewed, and in disappearing leave an inflamed surface behind. The serous exudation gradually ceases, the crusts become drier and more adherent, and are not renewed so often. The diseased skin by degrees resumes its natural condition, proceeding from the circumference to the centre, and the disease itself terminates in two or three weeks. It frequently happens that in place of declining, these symptoms continue for a much longer period, become more intense at intervals, and the eczema then becomes chronic,—a very remarkable condition which we shall have to speak of by-and-by.

3. *Eczema impetiginodes.*—Whether in this variety the vesicles assume the usual form of those of eczema rubrum at the beginning, as is generally the case, or that the progress of the inflammation is so rapid that its results do not appear to us until they are in an advanced stage, it often happens that we have two dis-

tinct diseases (a vesicular and a pustular) combined and existing together.

In eczema impetiginodes the inflammation is much more acute, the skin is swollen under the eruption, the vesicular fluid loses its transparency, and becomes purulent. These agglomerated purulent vesicles frequently run into one another, and soon burst. The fluid concretes, and instead of producing laminated crusts like eczema rubrum, soft yellow scabs, composed of one or more layers, are developed. These scabs fall off, and give exit to a reddish serosity; they are reproduced, and pursue the same course, until at length the inflammation diminishes, and the purulent vesicles are not redeveloped so often, or in such numbers. The scabs gradually become thinner, the surface beneath them is not so red, and at length the skin resumes its natural colour and condition. This eruption may continue for two or three weeks; it may be confined to a single region; it sometimes assumes a general character, when it is accompanied with febrile symptoms, and becomes much more severe.

We may often observe different degrees of inflammation in the same individual, especially when the eruption is general. Thus we may observe the vesicles, at first transparent, passing into the pustular state; sometimes half the vesicle may be opaque; and a yellowish colour, and greater thickening of the other half, indicate the transition that is taking place. In cases where this variety is confined to a particular part, vesicles of eczema rubrum may be seen in the vicinity of the vesiculo-purulent eruption, and they are also often observed in the centre of the eruption. Finally, eczema impetiginodes, in place of terminating in twenty or thirty days, may pass into the chronic state; but then it does not differ from chronic eczema, which succeeds eczema rubrum, and in this stage it only produces *true* vesicles, the pustular vesicles becoming much more rare. Eczema impetiginodes is not, therefore, a form of eczema rubrum complicated with the pustules of impetigo, but an eruption of vesicles, transparent at the beginning, and passing into the condition of pustular vesicles instead of true pustules. Otherwise, the disease would be a genuine form of impetigo, for at a certain period almost all the vesicles become pustular, and nevertheless we

shall see, when treating of the diagnosis, that there are well-marked distinctions between these two affections.

The inflammation is sometimes so active, that the disease may be complicated with the pustules of impetigo, and even with the larger pustules of ecthyma. These contain pus almost at the moment of their formation, their base is larger, and the fluid thicker and yellower than that of the others.

Acute eczema is generally accompanied with pretty severe febrile symptoms. Sometimes, when confined to a certain space, it seems as if it was to be a very severe disease, and yet it will pursue a regular course, and terminate speedily, without occasioning any other disturbance than a slight acceleration of the pulse.

Chronic eczema.—Whatever may have been the symptoms by which it is ushered in, eczema frequently passes into the chronic state. The skin being constantly irritated by the ichorous discharge, and by frequent eruptions, becomes deeply inflamed and excoriated, and fissures form about the joints. There is a continual and copious discharge of serosity, which is constantly saturating the linen; and in withdrawing the latter, care should be taken not to tear the vesicles, and produce rents, which often give issue to a considerable flow of blood. They leave behind a red, soft, and swollen surface, which often retains their impression. The eruption may continue for many months without much diminution in the serous discharge.

On other occasions, the exudation begins to decline after a certain period. It becomes thick, forms lamellæ, incrustations, and small, thin, soft, yellow, slightly adherent scabs, extending considerably, the bases of which are dry, but inflamed. These laminated crusts are formed more slowly than the former; they are usually drier, and the patient seems upon the point of convalescence, when, without any apparent cause, the inflammation is greatly increased. The skin becomes red again, and is covered with a new crop of vesicles, which soon burst, and the disease pursues the same course as before. It may thus be protracted for years with similar exacerbations, occurring at certain intervals.

Again, there are other cases in which there is not the slightest exudation. The scaly incrustations are drier, more adherent, and not so yellow. The skin is thickened, and is marked with deep

fissures. The crusts, which are easily detached, exhibit a slightly inflamed surface on falling off. Sometimes, however, especially in cases of general chronic eczema, the skin remains of a bright red colour even for months, and is covered here and there with dry, thin, flaky crusts. It is also cracked, and there is no perceptible exudation of serum. In this state eczema resembles, and has been confounded with, *psoriasis*, inasmuch as the incrustations are not now produced by the concretion of an exhaled fluid, but seem rather to be, as in the true scaly diseases, lamellæ of the epidermis. The appearance of vesicles will explain the real nature of the eruption. Biett has pointed out, in his clinical lectures, many cases in which eczema became a true scaly disease. The vesicular character becomes more evident as the malady approaches its termination. In some instances, particularly when eczema is confined to the limbs, it only occupies one or two small spots, around which the skin is smooth, tense, and shining; this form is covered with whitish lamellæ, as thin as the epidermis. No vesicles appear on these polished surfaces, and the diagnosis is very difficult, if a new eruption, or a knowledge of the preceding one, or sometimes even the presence of vesicles scattered round the circumference, does not throw light on the nature of the disease.

Chronic eczema, although at the beginning confined to a small space, may become extended over a large extent of surface. In some rare cases, it has been observed at the commencement to occupy a space not larger than a crown-piece, and yet it gradually spread, until it covered the whole limb.

Chronic eczema is invariably accompanied with intense itching, more distressing than the severest pain. The patient in vain struggles against it, but he cannot, however, resist the urgent desire to scratch himself, which only increases his torment.

These itching sensations are particularly intolerable when eczema is confined to certain parts, as the inner part of the thighs, for instance. It is then often kept up in women by a chronic discharge; it extends to the anus and vulva, and sometimes to the vagina, where it produces an intense degree of itching, which places the patient in a pitiable condition.

After a certain period, the itching begins to subside, the serous exudation gradually ceases, the scaly incrustations dry up, and

the skin is less inflamed. The seat of the eruption diminishes, the process of healing begins at the circumference, the lamellæ become thinner and smaller, they cease to appear, the skin is still a little more red than natural, but this colour soon disappears altogether. Finally, the disease becomes reduced to a small, dry, red surface, which is covered with extremely thin laminated crusts. The surrounding skin is smooth, tense, and firm, and only slowly resumes its natural state. The redness, as already stated, always continues for a certain time after the disappearance of the eruption.

The duration of chronic eczema is very variable; it may continue for months, and even years.

Seat.—There is no part of the skin which may not be the seat of eczema; but there are certain parts on which it appears more frequently than on others; for example, round the beard where the follicles are numerous; the pubis, the groins, the scrotum, and the axillæ. It may be confined to one particular region, as the breast, the scalp, or the ears, and constitute some important local varieties.

It generally attacks several regions at once; indeed, we have seen it cover the entire cutaneous envelope, both in an acute and chronic form. Biett is of opinion that the anatomical seat of this affection is not in the sebaceous follicles, but in the vascular membrane.* (*Dict. de Méd.*, 2nd *edit.*, *art. Eczema.*)

Causes.—Eczema is not contagious; however, in certain rare instances, it appears to have passed from one individual to another by the prolonged contact of two mucous surfaces. Biett has observed many cases where eczema was transmitted by coition.† It frequently attacks adults; women seem to be more subject to it than men. It generally appears during the spring and summer. The spring equinox, the summer solstice, and sudden changes of temperature, are marked by exacerbations of chronic eczema. It generally appears without any known cause; but it is occasionally the result of some direct agent, as the action of intense

[* The authors consider the anatomical seat of eczema to reside in the extremities of the sudoriferous ducts.—B.]

[† An urethral discharge, resembling gonorrhœa, may be produced by connexion with a female suffering from the discharge of chronic eczema.—B.]

heat, exposure to the rays of the sun, &c. It sometimes follows the application of a blister, and the eruption may then extend over the whole arm or thigh. Eczema is frequently produced by dry frictions, and especially by innunction with irritating ointments. It is thus that the variety called *mercurial* (*Hydrargyria*) is developed, and which does not differ either in its symptoms or progress from the others. It is often observed on the fingers of sugar refiners, or after a burn, and may be produced by any excess, particularly by the abuse of spirituous liquors. Whatever may be the influence of direct causes on the development of acute eczema, it is evident that there is a peculiar disposition of the economy to which is to be attributed its passage into a chronic state, and its prolonged duration in that form. Certain local varieties are produced and kept up by the causes which affect the parts they occupy. As, for example, chronic leucorrhœa will prolong eczema for an indefinite period. The handling of metallic and pulverulent substances is a frequent cause of eczema of the hands. It is one of these varieties which has received the name of baker's itch. But this affection appears sometimes with papulæ, sometimes with vesicles. Another proof of the worthlessness of a classification which mistakes causes for effects.

Diagnosis.—Eczema, in each of its varieties, may be confounded with other diseases perfectly distinct from it, and its diagnosis is, therefore, of the highest importance. *Eczema simplex* has frequently been mistaken for itch, to which, at first sight, it has a strong resemblance. Both are developed without inflammation; they occupy generally certain parts or localities, as the wrist, the sides of the fingers; they produce a smart itching, but the vesicles of itch are pointed, while those of eczema are flatter, and agglomerated, and perfectly distinct from the itch eruption, in which we often observe a single vesicle, or two, or three only on a surface of some extent, as the inner sides of the fingers for example, and this is never the case in eczema. The itching of eczema is a kind of smarting sensation, very different from that of scabies. In the former there is real pain, whilst in the latter the sensation is more agreeable than otherwise. Finally, the itch is essentially contagious, and eczema generally speaking is not.

Eczema rubrum may sometimes be confounded with miliaria, but

in the latter affection the vesicles are never confluent, as in the former, in which a vast number may suddenly appear on the surface. The vesicles are more voluminous in miliaria than in eczema; besides, the febrile symptoms which usually attend symptomatic miliaria, and which indicate some latent severe disease, will suffice to distinguish one from the other. That variety of miliaria which follows severe exercise in the heat of summer has a considerable resemblance to eczema; but the vesicles are more scattered, there are copious perspirations, and the eruption disappears suddenly in the former instance.

Eczema impetiginodes presents several well-marked characters to distinguish it from *impetigo*. The vesicular affection invariably occupies large surfaces; impetigo, on the contrary, is confined within a narrow compass. The pustules of impetigo are never transparent at the beginning; they have a larger base, and contain a thicker fluid. The pustular vesicles of eczema impetiginodes are always vesicular at their origin, and never contain true pus, but a yellowish sero-purulent fluid. Besides, their different terminations indicate still more clearly the distinction between these vesicles and the pustules of impetigo. In the latter, the pustules constantly terminate in thick, rough, uneven, yellowish red scabs, whilst the pustular vesicles of eczema merely form thin, soft incrustations, more broad than prominent; and, moreover, we always find in this affection vesicles of eczema rubrum round the eruption, which never occurs in impetigo. The traces or marks which these two affections leave after them on the skin also present distinctive characters. Those of impetigo have a bright red colour; and occasionally that eruption is followed by slight cicatrices. This never takes place in eczema impetiginodes, which leaves merely slight red spots.

Eczema impetiginodes might be confounded with the *itch*, when the vesicles of the latter are accompanied with pustules; but, leaving the pustules out of the question, which, in the majority of cases, are merely complications, attention should be directed to the numerous vesicles; and the characters which have been already mentioned as distinguishing the itch from eczema simplex will facilitate the diagnosis.

The diagnosis of *chronic eczema* is often much more difficult than that of any of the foregoing varieties. Amongst the eruptions

with which it might be confounded we may mention lichen, two varieties of which are sometimes mistaken for eczema.

Lichen agrius, like eczema, is accompanied with a serous exudation, terminating in the formation of crusts; but these are thicker, yellower, not so large as those of eczema, and are not unlike scabs. The surface of the skin beneath them does not present a red, smooth, shining, and slightly excoriated surface, as in eczema, but is fretted with small prominent spots or papulæ, which may be detected by the eye or by the finger, if passed over the eruption.

In other instances lichen, like chronic eczema, may develope thin, dry laminated crusts, without any serous exudation or local inflammation; but in these cases the skin is more thickened and rough than in eczema, so much so that it is often difficult to raise it between the fingers. Besides, in lichen we generally find papulæ scattered here and there near the eruptions, which may easily be recognised by their hardness and slow progress, exactly as vesicles are developed in eczema, close to the eruption, which can readily be distinguished from the elements of lichen. These varieties of lichen and eczema which attack the hands require the greatest care in distinguishing the one from the other.

Some varieties of chronic eczema have a great resemblance to *psoriasis;* but the presence of vesicles in the neighbourhood of the eruption, and their reappearance in the former affection, is sufficient to distinguish them. Moreover, the scales are always thinner, more dry and friable, although softer. They are almost invariably accompanied with perspiration, which never occurs in psoriasis. After they fall off, the skin does not present, as in psoriasis, a smooth, red, and elevated, but a fissured surface. However, in certain rare cases of chronic eczema, the eruption may become general, and the skin may assume a red tint, at the same time that it is covered with whitish laminated scales. The diagnosis is, in this instance, difficult, especially if the early phases of the disease have not been observed, and if there is no exudation present. It can, however, be distinguished from psoriasis by these signs: the skin is neither elevated nor hypertrophied, as observed in the latter disease, and the cracks or fissures are the result of the muscular movements with which they correspond, and never spread over the entire surface, in every direction, as in *psoriasis inveterata*. But we again repeat,

that it requires the greatest care and attention to form a correct diagnosis.

Prognosis.—Eczema is, generally speaking, a slight disease, especially its acute form; but when it spreads over a large surface and becomes chronic, it is an exceedingly troublesome and obstinate affection. The prognosis is not favourable, when it persists for several years, and when new eruptions form at the time the disease appeared to be dying away. Without endangering the life of the patient, it embitters his existence, when it is prolonged in this indefinite manner.

It may co-exist with lichen, and particularly with the itch. It is frequently complicated with the pustules of impetigo and ecthyma. In some rare instances it becomes converted into a still severer disease. It assumes the bullous form of Pompholix. Biett has related some instances of this kind. We have since observed several cases of a similar nature.

Treatment.—The treatment of eczema simplex usually consists in the employment of refreshing drinks, lemonade slightly acidulated, tepid baths, and regimen. These measures are generally sufficient to dispel the eruption in a very short time. But when the disease is of long standing, and accompanied with smart itching, particularly when it is diffused over the skin, it will be necessary to administer laxatives occasionally, and alkaline baths containing from four to eight ounces of the carbonate of potass or of soda, according to the age of the patient and the state of the eruption.

Eczema rubrum and *eczema impetiginodes* require no other treatment than that necessary for acute inflammation. When they are local and circumscribed, diluent drinks and regimen will suffice. But when the disease occupies a large surface, and is accompanied with quick pulse, and especially when the patient is young and vigorous, it is necessary to have recourse to general or local bleeding. The lancet will be required in some cases after leeches have been employed in the vicinity of the eruption. If the disease is diffused, venesection may be repeated with advantage. In a word, the only remedies which acute eczema requires are regimen, simple or emollient baths, local baths of bran water or of marshmallows; poultices of potato-flour, and some emollient application, when the vesicles burst and leave a red, raw, and painful surface

exposed. The preparations of sulphur, so injurious in the treatment of all the *dartrous* diseases, should be carefully avoided. With regard to the mercurial plan of treatment, we have frequently seen patients at the Hospital of St. Louis, in whom eczema rubrum was increased and kept up by this injudicious method. It often became converted into eczema impetiginodes, and even complicated with the eruption of impetigo and ecthyma, and was thus prolonged for months. On the other hand, acute eczema, which may be diffused over the whole cutaneous surface, and appears to be a severe disease, yields in twelve or fifteen days to the antiphlogistic treatment above mentioned. In every case the first object should be to endeavour to remove the cause of the disease if possible. Thus, for instance, the patient should guard against everything that would irritate the parts, and should desist from his usual employment, if it is found to excite the eruption. We have frequently observed, and amongst other instances, in the case of a labourer working in a laboratory, the eruption of eczema simplex reproduced as often, and as soon as, the individual resumed his work.

Chronic eczema, before it assumes a severe character, generally yields to the following treatment. Acidulated drinks, as, for example, a scruple to half a drachm of dilute sulphuric or nitric acid to a pint of barley water; the nitric is more efficacious than the sulphuric acid;* they are particularly beneficial in those cases where a copious serous exudation and a smart itching exist. The patient should commence with small doses, and take a little cold water after each dose, until the stomach becomes accustomed to the acidulated drinks. The temperature of the baths ought not to exceed 88 to 90 deg. Fahr. The patient should remain in the bath about an hour. It may be rendered emollient by mucilage, gelatine, &c. The quantity of gelatine necessary for a simple bath is from half a pound to a pound.

Laxatives are frequently required. They may be administered alone or alternately with acidulated drinks. Thus, for example, in any bitter infusion, the sulphate of soda, or still better the sulphate of magnesia in the proportion of half an ounce to the pint, may be administered in divided doses; also about two drachms of the

[* I have found the nitro-muriatic acid most efficacious in similar cases.—B.]

acidulated tartrate of potass in a little milk, will be found very efficacious.

The alkalies may be advantageously employed externally as well as internally. They are particularly useful externally when the emollient applications and remedies fail to remove the itching. In these cases, local baths, containing from half an ounce to two ounces of the carbonate of potash, or of soda, will sensibly diminish the irritation. The patient to take the bath before going to bed. Half a drachm to a drachm of the bicarbonate of soda in a pint of some bitter infusion may be given internally. When the eruption resists these remedies and continues to spread, recourse must be had to more active measures, such as purgatives, sulphureous waters, baths, and the vapour douche. Calomel may be administered in about four-grain doses every morning fasting for a week or two. It should then be changed for Plummer's pill, or aloes, or jalap, in the usual purgative doses, attention being at the same time paid to the digestive functions. Seidlitz water might be advantageously prescribed in doses of one or two glasses every morning.

The sulphureous waters may be administered internally or externally. They are principally useful when the disease is of a long standing, confined to the lower extremities, and of a violet colour. The waters of Barèges, Enghien, and Cauteretz, are most frequently employed;* they can be made artificially by adding to a simple bath two or three ounces of sulphate of potash, the quantity of which may be varied according to the degree of excitement to be produced. In every instance simple baths should be administered alternately with the sulphur baths. When sulphur is to be given internally, it should be mixed with two parts of barley-water or milk. By these means, the quantity of the mineral water may be gradually increased until it can be taken pure.

Local or general, simple or emollient baths, as before stated, are the only measures that will be expedient at the commencement, and whenever the inflammation becomes more active. In the latter event, whatever may have been the previous remedies employed, the application of leeches in the neighbourhood of the eruption will be attended with advantage.

[* The Harrowgate waters will answer equally well.—B.]

Vapour baths are occasionally very useful in cases of chronic eczema, but the temperature should not be too high. The vapour douche is often of the greatest benefit when the disease is local. When the eruption is confined or reduced to a small compass, the cure may be hastened by the application of an ointment composed of the protochloride of mercury and lard. As a rule, however, unguents should not be employed in eczema; and, indeed, they can rarely be continued long without doing harm. In the course of the treatment it will be often necessary to employ lead lotions in order to allay the itching, or else an emulsion of bitter almonds, dulcamara, or henbane.

Sometimes a severe form of chronic eczema will resist all these measures, and it will then become imperative to have recourse to a more active and vigorous plan of treatment, provided always that the digestive organs are not suffering from chronic disease. It is in those cases of rebellious eczema that Biett's treatment succeeds in a manner truly surprising. With the aid of *tincture* of *cantharides*, which is particularly applicable for females, and some of the *arsenical* preparations, Biett has frequently overcome with astonishing celerity the most inveterate cases of eczema.

The tincture of cantharides should be given at first in doses of three, afterwards of five minims every morning, in a little tisan, and every six or eight days the dose may be increased gradually from five minims up to twenty or thirty, without inconvenience, taking care at the same time to omit the remedy for a certain period now and then, and always to recommence with the smallest dose.

Among the preparations of arsenic, the best are Fowler's solution, Pearson's solution, [Donovan's solution,] and the solution of the arsenite of ammonia. The base of the first is the arsenite of potash. It is administered at the commencement in doses of three minims in some inert fluid, every morning. After five or six days, it may be increased from two to three drops. Biett could never exceed fifteen drops a day, after repeated trials.

Pearson's solution is milder and more easily managed; it is more suitable for females, irritable subjects, and is the only preparation of arsenic that should be administered to children. Its base is the arsenite of soda in the proportion of the eighth of a

grain to a drachm. It may be given in doses from a scruple to a drachm. Biett introduced into practice, in 1818, the solution of the arseniate of ammonia; a very useful remedy. These three preparations may be often substituted with advantage for each other. Pearson's solution may succeed where Fowler's had failed, and *vice versa*. The administration of the arsenical preparations requires great caution and attention. If symptoms of irritation of the digestive organs appear, the remedy should be suspended; but the slight uneasiness caused by the medicine during the first few days of its administration, and which will soon disappear, should not be mistaken for that condition. Besides, it is often useful to suspend its use for some days, and then resume it, or to substitute the tincture of cantharides for some days for the mineral solution.

Frequently in cases when the eruption is limited, and assumes the scaly form, when the skin is dry and chapped, and slightly hypertrophied, as we sometimes observe on the hands, gently stimulating local remedies must be employed. In these cases, ointments of the iodide, bin-iode, or nitrate of mercury, will be found very efficacious. A little camphor may be added to allay the itching. These mercurial preparations have been employed externally with the greatest benefit, but as internal remedies their utility is doubtful, and sometimes they are decidedly injurious. It is in these cases that the sulphur baths, both local and general, may be employed with advantage. The beneficial effects of the vapour douche have been well proved in these instances. Caustic should never be employed in the treatment of eczema, in which it has indeed been strangely abused; the application of stimulating ointments is by far more advantageous.

Local Varieties of Eczema.

Before concluding the subject of eczema, we shall briefly describe one or two cases in which the disease is confined to certain parts, and presents some important peculiarities.

Chronic eczema of the mammæ is, more frequently than any other variety of the disease, confined within a very limited compass. It surrounds the nipple, and produces deep chaps. It requires active treatment, and is always very rebellious; we have seen it continue for years.

Eczema of the scrotum, and of the *inner and upper parts of the thighs in women*, is also very rebellious. It is the same as that which surrounds the anus. The vapour and sulphur douche, and fumigations, together with brisk purgatives, are the most effectual remedies. In robust individuals, who are otherwise in good health, purgatives may be freely administered.

Eczema of the ear is also very rebellious, and as it is sometimes accompanied with considerable hypertrophy, it may be necessary to place a piece of prepared sponge in the external meatus, in order to prevent occlusion.

Eczema of the scalp may appear with certain phenomena much more important than those observed in many varieties of porrigo, with which it has been confounded. Thus we often see in persons attacked with this form of eczema a copious serous exudation, which mats the hair together. This fluid soon dries or concretes, and forming into scales, surrounds the hair in tufts, which are thus entangled with each other; and whether it is owing to a natural desquamation, or to this interlacement, these crusts soon become detached. This phenomenon is not so visible in females, but it will generally be discovered if the hair be examined close to the roots. The presence of these white shining scales in the middle of the hair has a very singular and remarkable appearance, especially in persons of dark complexions.* In some cases the serous exudation is not so abundant; it forms small whitish, dry, furfuraceous, scaly incrustations, which freely fall off on the slightest friction, and re-appear with wonderful celerity. These two varieties, which do not at all injure the bulbs of the hair, merely require for their treatment acidulated drinks and emollient lotions at the commencement, and when more advanced, alkaline lotions and gentle laxatives. It is sometimes sufficient, when children are attacked, to wash the head with soap and water, and to comb it frequently; but in the great majority of cases, the energetic remedies above mentioned will be found necessary.

[Eczema is perhaps the most frequent, as well as the most trouble-

[* The late Dr. A. T. Thomson recommended as the best ointment in eczema capitis, two or three drachms of the compound lead plaister, melted and rubbed up with an ounce of simple cerate; but lotions may be substituted with advantage for ointments in this disease.—B.]

some cutaneous affection that the practitioner will meet in practice. Some forms of this eruption baffle, for a long time, every remedy and every kind of treatment. I have seen cases of this disease in the Hospital of St. Louis, which had for months defied the practical skill of Biett to subdue them; and when they ultimately recovered, one could scarcely attribute the cure to any particular treatment, unless that of the *vis medicatrix naturæ!* When *chronic* eczema fairly engrafts itself upon the skin, it will try the patience of both the invalid and his medical attendant, and may be prolonged indefinitely by the employment of injudicious remedies. I have seen cases of this variety treated locally, with the favourite remedy of citrine ointment, in English practice, and always with unsatisfactory results. Greasy applications, under any circumstances, are barbarous and often injurious remedies in the treatment of cutaneous disease, not excepting the particular eruption under consideration. The remedies which I have found most useful in the treatment of eczema are:—

The mineral acids, liquor potassæ and bicarbonate of potass; cantharides, in many cases a most efficacious remedy; the iodide of mercury; the arsenical preparations, especially Donovan's solution, (liquor arsenici et hydrargyri iodidi;) and tonics, as the citrate of iron and quinine, internally: and externally, repeated applications of cloths moistened with tepid water; poppy-head fomentations in acute forms of the eruption upon the limbs; lotions of the bicyanuret of mercury, two grains to the ounce of distilled water, a very beneficial application in the inveterate forms of eczema; the linimentum aquæ calcis, as recommended by the late Dr. A. Thomson. Professor Bennett, of Edinburgh, considers eczema of the scalp and adjacent parts to be a purely local affection, and consequently requires only local treatment. For this purpose he recommends a solution of two drachms of carbonate of soda to a pint and a half of water, and that lint saturated in this should be kept over the diseased surface, and covered with oil-skin to prevent evaporation. He believes that keeping the parts moist is a necessary part of the treatment. (*Edinburgh Monthly Journal*, August, 1849.) I do not coincide in Dr. Bennett's opinion as to the local nature of eczema capitis. Gibert recommends calamine ointment in the local varieties, and in eczema genitalium he prescribes an ointment consisting of the yellow subsulphate of mercury, twelve drops of laudanum, and one ounce

of lard. Trousseau advises baths containing bichloride of mercury, and states that he never observed any injurious effects from them even in children. The American editor of the first edition of this translation (Dr. Bulkley) says that he has derived much benefit from the use of oil-skin, and also of very thin sheet India-rubber, worn over the affected parts, when the skin is dry and torpid. He also has found good results from a solution of alum, one or two drachms to a pint of water, in chronic cases of eczema, attended with moderate discharge and great itching. The cold water douche has been recommended by Hebra, particularly in eczema capitis. Mr. Erichsen remarks, that all the cases of eczema of the head he has seen in persons over seventeen or eighteen years, have occurred in females, and were generally associated with menstrual derangement. When amenorrhœa is present, he uses the tincture of cantharides alone, or in combination with liquor potassæ or Fowler's solution. As already observed, unguents may be safely dispensed with in the treatment of eczema. The iodide of sulphur in chronic cases of eczema of the legs is, perhaps, the only exception. There is, however, an excellent local application for chronic eczema of the extremities, which may have resisted the usual remedies. It consists in fumigating the parts with sulphur, or the volatile gum-resins.

Alibert used to employ cinnabar for this purpose with good effect, and I have had cases under my care, of long standing, in whose treatment all the ordinary measures had failed to heal the broken surface or arrest the discharge, perfectly cured by the daily application of the fumes of sulphur, for two or three weeks, to the diseased parts. When judiciously employed, and in appropriate cases, they appear to alter the vitality of the morbid parts, and to induce a state of healthier action. If the eruption is indolent, they gently stimulate the diseased surface into greater activity, and by regulating the strength of the medicine according to the nature of the case and the object in view, the most salutary effects may often be derived from its use. I have seen cases of lepra and of chronic eczema of several years' standing cured by the fumes of the flowers of sulphur alone. The fumigation will be found particularly applicable in cases of scaly and eczematous eruptions, and in foul, ill-conditioned ulcers of the lower extremities. Duval's fumigating apparatus is the best adapted for administering this remedy. If that cannot be obtained, and the

disease is seated on the limbs, a tin case will answer as well, provided it is large enough to hold the limb. A heated iron is to be placed at the bottom of this apparatus, with a grating over it to protect the foot or hand. The flowers of sulphur, or the gum resins, whichever is to be employed, should be placed on this heated iron, and the limb instantly put into the bath, the top of which should be covered, to prevent the vapour from escaping. The limb may be continued in the bath from fifteen to twenty minutes, according to circumstances. The quantity will be increased or diminished as the progress of the complaint may indicate. I do not mean to assert that fumigation is a specific for the inveterate cutaneous eruptions indicated above, but I do think it is worthy the attention of practitioners, and that it will be often found an efficacious remedy.—B.]

HERPES.

SYN.—*Ignis sacer; Formica; Erysipelas phlyctænodes; Dartre; Olophlyctide;* Tetter.

The term *herpes*, or tetter (Ἕρπης, from ἕρπω, to creep,) was employed for a long period in as vague a sense as that of dartre.* It was applied to many eruptions of a perfectly different nature, until at length Willan adopted it exclusively for the following distinct genus.

This genus is characterized by an eruption of vesicles, forming in groups upon an inflamed base, perfectly circumscribed, and separated from each other by intervals of sound skin. The form and seat of these groups constitute several well-marked varieties, which may be described separately. The different species of herpes usually follow an acute course. They generally last for a week, but in some instances they may be prolonged to two or three weeks. There are, nevertheless, cases in which the disease may continue for months. Herpes is rarely, if ever, accompanied with dangerous symptoms. The most usual phenomena are slight indisposition, depression, anorexia, and rarely fever. In some few instances, herpes is pro-

[* "And a most instant *tetter* bark'd about,
Most lazar-like, with vile and loathsome crust,
All my smooth body."—*Hamlet.*]

duced by some direct agent, but in by far the majority of cases it manifests itself without any appreciable cause; and even when there is a direct evident cause, such as cold air, which usually occasions herpes labialis, there is at the same time a peculiar state of the economy, of which the eruption is symptomatic. The formation of vesicles in groups, upon an inflamed base, is always sufficient to distinguish herpes from other vesicular affections. It is, generally speaking, a mild disease, pursues a regular course, and requires but simple treatment. Moreover, herpes may exist simultaneously with other diseases, either of the skin or of some internal organ.

Herpes Phlyctænodes; Miliary herpes.

Under the common denomination of herpes phlyctænodes, are classed those varieties of herpes which have no determinate form, and no particular seat. Herpes phlyctænodes is generally characterized by an eruption of small vesicles, which may be developed on any part of the body, and frequently on several parts at the same time. They become agglomerated, and spread over a surface which varies in extent from that of a crown to that of the palm of the hand. We commonly observe in the same instance, very minute vesicles, and others the size of a large pea; but the smaller vesicles are always much more numerous than the larger ones. This variety is most frequently developed on the upper parts of the body, as the cheeks, the neck, the chest, and the arms: it rarely appears on the lower extremities. Generally speaking, herpes phlyctænodes is confined to one or two vesicular groups, and disappears about the seventh or eighth day. However, in cases where it appears successively on several different parts, or when several clusters become almost united together, it may be prolonged beyond this period, but rarely beyond the second week. In some rare instances it has assumed a decidedly chronic form. There was a patient in our ward at the Hospital of St. Louis, who had for six months a patch of herpes, about the size of the palm of the hand, on the inside of the thigh, which had resisted the most energetic treatment, and especially the application of blisters. The eruption was not on any other part of the body. When herpes phlyctænodes appears in several groups, the latter are generally pretty distant from each other; but how-

ever close they may be, the skin between them remains perfectly sound.

Symptoms.—Each group, composed of six or eight vesicles, is developed in the following manner. A number of almost imperceptible red spots appear on the part about to become the seat of the eruption, and are crowded together within a comparatively small space. The next day the part appears red, inflamed, and covered with prominent vesicles, firm to the touch, and the size of which varies from that of a millet seed to that of a small pea. The redness generally extends several lines beyond each cluster of vesicles. The small vesicles are by far the most numerous; they are hard, globular, and transparent the first day, but the next day, or even before it, the transparency is replaced by an opaque or milky tint. An itching sensation, often very painful, frequently accompanies the development of each group. The vesicles begin to fade about the third or fourth day, and by the seventh or eighth they have generally disappeared. Some of them contain a purulent fluid, others are transformed into brownish incrustations. They soon desquamate, but slight ulcerations are occasionally observed here and there. The red colour remains for some days after the disappearance of the eruption, and then gradually subsides. This affection is seldom accompanied with any important symptoms. Indisposition, and sometimes anorexia and slight febrile disturbance, are the only phenomena which accompany it when confined to certain limits: moreover, these symptoms only appear with the eruption, and vanish as soon as the latter is developed. With regard to the local symptoms, which consist in a smarting and sometimes very acute burning sensation, as in herpes zoster, they accompany the eruption through all its stages, and even continue after it has subsided.

Causes.—Herpes phlyctænodes generally attacks young subjects. In warm climates it is frequently produced by the rays of the sun. Excess in diet, anxiety, grief, and other causes of a similar nature, often seem to excite this disease; but in general the causes on which it depends are entirely unknown, or at least very difficult to be detected.

Diagnosis.—The characters peculiar to herpes phlyctænodes, as, for example, clusters of numerous vesicles situate on a red and

inflamed surface, the extent of which varies from that of a crown to that of the palm of the hand, are sufficient to distinguish this variety from other affections, whether vesicular or bullous. Pemphigus is the disease with which it is most likely to be confounded; but they can be distinguished from each other easily by observing, that in herpes we find clusters of vesicles separated one from the other, whilst in pemphigus the bullæ are isolated, and not in clusters. Sometimes, it is true, we find red patches in pemphigus, where the bullæ have been closer than usual; but by recollecting that the latter are bullæ, and not vesicles, we can seldom go wrong. Again, some of the vesicles may be transformed into bullæ, but they are very few, and are scattered here and there.

Herpes phlyctænodes cannot be confounded with *eczema*, unless in rare instances, where the vesicles of the latter appear in groups. Even then they may be distinguished by the following characters: the vesicles of eczema are less elevated, and redder; it is difficult to perceive the transparency; and finally, when they are grouped together, they become confluent, whilst those of herpes remain isolated. With regard to the other varieties of herpes, they only differ from this in their seat and form.

Treatment.—Herpes phlyctænodes is rather a mild disease, and requires merely diluent and acidulated mixtures, regimen, mucilaginous lotions, and tepid baths. Bleeding is seldom or never required, and seems to be of little avail when it is employed.

Herpes Labialis.

Syn.—Exanthema Labiale—Frank.

This variety is characterized by small clusters of vesicles, more or less numerous and distinct, scattered irregularly round the mouth. Most commonly herpes labialis occupies a certain defined surface on either lip. It usually appears on the external aspect, and generally at the junction of the mucous membrane with the skin. However, in some cases it is altogether confined to the external mucous membrane of the lip, whilst in others it is only to be seen on the skin immediately above the point of junction. Sometimes the clusters extend as far as the cheeks, the chin, and

the alæ of the nose; and in rare instances they have been observed in the pharynx.

Herpes labialis is sometimes preceded for several hours by a slight redness; on other occasions the eruption appears suddenly. The surface on which it is developed is swollen, and is attended with an acrid burning heat. It then becomes red, shining, and painful to the touch, and some vesicles begin to point here and there. The tumefaction of the lip extends beyond the vesicles, which are rapidly developed, and many of them run into one another. They are of various sizes, but the largest does not exceed that of a small pea, and are filled with transparent fluid. The irritating heat gradually subsides, as soon as the eruption is developed; the transparent fluid of the vesicles becomes opaque; and in the course of three or four days it assumes a yellowish tint, and finally becomes sero-purulent. By this time the redness and swelling have almost disappeared. Brownish crusts are now formed, which fall off about the seventh or eighth day of the eruption; when they disappear too early, they are replaced by others, which continue much longer. After the eruption subsides, it leaves behind a small red surface, which soon fades. Its appearance is almost always preceded by a state of general indisposition, which continues for twenty-four or forty-eight hours.

Causes.—Herpes labialis is very often produced by cold air, as, for instance, a person living in a heated room, and going into a cold damp atmosphere, is very liable to be attacked. It frequently accompanies coryza, sore-throat, gastritis; and in those cases it sometimes penetrates to the inner surface of the lips, and even to the roof of the palate and tonsils. The contact of acrid and irritating food may also produce the eruption. It frequently supervenes on intermittent fever. It may be complicated with inflammation of some of the internal organs, but especially with that of the lungs.

Diagnosis.—The arrangement of the vesicles in clusters, their regular progress, the large size of some of them, which finally contain a sero-purulent fluid, will suffice to distinguish herpes labialis from eczema of the lips. It cannot be confounded with psoriasis of the lips, if the dry scales and striated furrows of the latter be borne in mind.

Treatment.—Herpes labialis is such a slight affection, that it hardly requires any treatment. However, when it is accompanied with the acrid heat and painful tension of the skin already mentioned, cold lotions, containing a few grains of sulphate of zinc, or sulphate of copper, and a few drops of the acetate of lead, will be of much service. No remedies can prevent the disease running its course. In every instance vicissitudes of heat and cold should be carefully avoided.*

Herpes Preputialis.

Herpes preputialis is known by the appearance of one or more small groups of vesicles on either the internal or external surface of the prepuce. It first appears in the form of several red spots or patches, more or less inflamed, rarely exceeding the size of a shilling, and generally much smaller. These patches are soon covered with small globose vesicles, which differ slightly from each other, according to their situation. Those clusters situated on the external surface are slightly inflamed; the vesicles, which are transparent and distinct, follow the ordinary course of herpes, with the exception of their fluid being re-absorbed; the vesicles then break down, and a slight desquamation ensues. Sometimes, however, the serosity becomes opaque at the expiration of a few days, and small scaly incrustations are formed over the seat of the disease, which terminates about the seventh or eighth day, frequently earlier. The inflammation is much more active when the vesicles form on the internal surface of the prepuce; they increase rapidly in size, and unite in groups of two or three vesicles to each.

[* However mild this variety of herpes may be in its nature and progress, it is nevertheless frequently ushered in by an exceedingly smart feverish attack. I have more than once observed cases in which the eruption was preceded by a train of acute inflammatory symptoms, commencing with rigors, and terminating in the course of twenty-four hours in the development of vesicles on the lips, and on the prepuce at the same time. The severity of the symptoms would apparently indicate the advent of some more important affection than that of a slight vesicular eruption. In herpes labialis the vesicles are often tedious and slow in disappearing. As soon as each vesicle ripens, it should be transfixed with a fine-pointed needle, so as to allow the contained fluid to escape, without exposing the surface. By this method the process of desquamation will be materially promoted, and the duration of the eruption considerably shortened.—B.]

They are extremely thin, and so transparent, that the red colour of the skin beneath may be seen through them. The fluid soon becomes sero-purulent, small crusts are formed, which are gradually detached, either naturally or accidentally, and expose to view one or two excoriated spots, which can easily be distinguished from syphilitic ulcerations. The skin soon resumes its natural colour when the scabs fall off.

A slight itching at the beginning of the eruption, and a slight smarting when excoriations are present, are the only symptoms which accompany herpes preputialis. This variety pursues an acute course, and seldom lasts long. Herpes preputialis may assume a chronic form, and in this condition, as Biett has well observed, the accompanying symptoms are much more important and severe. The eruptions are frequently reproduced, the inflammation is deep-seated, the prepuce becomes rough and difficult to draw back, the slightest movement cracks and tears it. The orifice contracts for a certain period; it often remains close to the mouth of the urethra, and yet the opening of the prepuce does not correspond exactly with the meatus urinarius, the oozing from which is constantly irritating the diseased parts. The edge of the prepuce becomes puckered, as if it was folded upon itself. In some cases the contraction is less marked, the meatus is free, but the edge of the prepuce is in the same condition. It becomes hard, like cartilage, and forms a kind of ring, which it is difficult to move. The exertions required to uncover a part of the glans frequently produce extremely painful abrasions all round this ring.*

Causes.—This variety of herpes seldom attacks any but adults. The rubbing of the clothes, certain chronic discharges, the irritation produced by the secretion of the sebaceous glands under the prepuce, if allowed to accumulate, may produce the eruption. It, however, more frequently appears without any known cause. The contraction of the urethra, which may be present at the same time, has no other relation with herpes than that of its co-existence.

[* A similar form of herpes attacks females in the pudendum (*herpes pudendi*), causing intense itching, and is generally accompanied by the same symptoms as when it occurs on the prepuce. It usually appears on the external aspect of the vulva, or on the mucous surface internally. This variety has often been mistaken for *prurigo genitalium*.—B.]

Diagnosis.—The seat of this variety of herpes has frequently thrown much obscurity on the diagnosis, and it has more than once been mistaken for primary syphilis. If the peculiar characters of herpes preputialis are borne in mind, it appears to us almost impossible to confound it with syphilitic ulceration. In the first place, it is a vesicular disease, and all the characters of the genus herpes are so marked, that it cannot for a moment be mistaken by any careful observer. No one could mistake the thin flattened scaly crust for the thick elevated scabs of syphilis. The excoriations are quite superficial, and even throughout, and appear in groups, like the vesicles which preceded them. The syphilitic ulcerations, on the other hand, are remarkable for their depth, their hard elevated edges, and the whitish hard pellicle which covers them. Nevertheless, a vesicle of herpes preputialis has frequently been mistaken at the commencement for a syphilitic sore. In these cases, cauterization, and even mercurial frictions, have often been employed to destroy the supposed disease. Under the influence of this erroneous treatment, herpes passes into the chronic state, and from a simple affection it becomes a rebellious and obstinate disease, which lasts for years, and ultimately becomes complicated with phymosis. Fortunately, it is always easy to avoid this error. It is sufficient to know that the venereal sore never commences with a vesicle, but with a redness and true ulcerative inflammation.*

Treatment.—Injections between the prepuce and glans of the decoction of marsh mallows, a few local emollient baths, and lemonade, are the only measures required in a majority of cases. However, in some instances, it becomes chronic, and resists the

[* Notwithstanding these striking and distinctive characters, it is often very difficult to distinguish at once herpes preputialis from a syphilitic sore, especially when the vesicles have formed on the inner surface of the prepuce, when they have burst, and when no perfect vesicles are present to assist the diagnosis. As soon as the cuticular envelope breaks or falls off, the abraded surface beneath is irritated, and prevented from healing, by friction against the glans, with which it is constantly in contact. The parts should be kept separate by a piece of dry lint interposed between them; and after one or two applications of a sulphate of zinc lotion, containing three or four grains to the ounce, the nature of the sore, if vesicular, will readily be detected. This lotion will prove as effectual in the herpetic sore, as dry calomel placed over a healthy chancre, so as to cover it completely, will also, in its appropriate case.—B.]

most energetic treatment. Biett has related many remarkable cases of this nature in his lectures, and we have seen many others. It will then be necessary to have recourse to emollient and alkaline lotions alternately; laxatives, soothing ointments, and vapour, alkaline, and sulphureous baths. The frequent contraction of the free edge of the prepuce is the most rebellious and troublesome symptom. Biett has recommended the introduction of a sound in this event. As a last resource, the operation for phymosis may be performed. [Caustic applications should never be employed in these cases. They will aggravate the disease, and convert a mild and simple eruption into a serious chronic ulcer.]

Three important varieties of the genus herpes still remain to be described. They appear at first to be distinct species, but on closer examination they will be found not to differ from herpes phlyctænodes except in their more determinate form. However, as they are of frequent occurrence, and as there still seems to be some doubt as to their nature, we shall describe them separately. Herpes zoster or zona, herpes circinatus, and herpes iris, are the varieties alluded to. Herpes iris occurs much less frequently than the others. It was classed amongst the exanthemata by Willan, and has a great resemblance to a variety of roseola already described.

Herpes Zoster, Zona, or the Shingles.

Ignis sacer; Erysipelas pustulosum; Zona repens; Zona serpiginosa.

It is surprising how herpes zoster (Ζωστὴρ, Ζώνη) could ever have been described as a species of erysipelas, with which it has no symptoms in common. Yet as it has been so regarded and described by writers on skin diseases, we shall dwell for a moment on the probable cause of that error. It arises, no doubt, from the fact that certain forms of erysipelas are complicated with bullæ, but there is a vast difference between the detached, circumscribed, and frequently enlarged elevations of the epidermis in erysipelas, and the small vesicles arranged in groups, and rarely exceeding the size of a pea, which constitute herpes zona. This, together with the regular progress of the latter, the same as in herpes phlyctænodes, is sufficient to establish the relationship of these two affections, and to distinguish herpes zona from erysipelas.

Herpes zona is known by the presence of irregular patches, of variable size, and of a bright red colour, covered with agglomerated vesicles, which appear in the form of a zone on the body or the limbs. The zone usually commences at a certain point of the median line, and extends round to a point on the opposite side, without ever going beyond that line. It appears most frequently on the trunk, in the shape of a semicircle or belt. It not unfrequently commences on the trunk and terminates on the limbs. Thus, it often begins at the middle of the inferior posterior lumbar region, and passes obliquely round to the external and anterior iliac region, arrives at the groin, and terminates on the inner side of the thigh; or again, it commences on the upper part of the back, reaches first the posterior, then the anterior part of the shoulder, and terminates on the internal aspect of the arm, sometimes as low down as the elbow. Two other lines are occasionally observed issuing from this zone, one of which proceeds along the arm, and the other along the lower extremity. Its most frequent situation is round the base of the thorax. It is seldom seen on the limbs alone. We have most frequently observed it on the right side; while others have met with it oftener on the left. It is sometimes situated on the neck and face, and even extends into the mouth on one side. We have often observed it on the right side of the scalp. It never exists on two sides at the same time. Those cases which are described as encircling the whole body, must be referred to herpes phlyctænodes. In all cases these zones are formed not by a regular continuation of vesicles, but by isolated groups which pursue the same course, and their interstices are perfectly sound. Sometimes these groups approach near each other, at others they are widely separate.

The disease lasts from one to three or four weeks. It never assumes a chronic form, and it is evident from the passage so often quoted from Borserius, (*Inst. Med.* vol. ii. p. 29,) to establish the existence of this condition, that the name of chronic zona has been given to the painful ulcerated spots frequently remaining after herpes zoster.

Symptoms.—Herpes zona first appears in the form of bright red, irregularly-shaped patches, pretty close to one another, which are developed successively at variable intervals, and thus encircle one

half of the body. The patches sometimes commence at both ends of the zone at the same time, and become connected by the development of intermediate patches. Generally, those which begin and terminate in this manner are larger, and have an irregularly-rounded form, whilst the patches that are crowded, and set close together, are much smaller. In some rare cases their development is accompanied all through with a painful burning sensation. If they are carefully examined, a number of small prominent silvery-white looking spots may be detected, which soon increase in volume, and finally become distinct transparent vesicles, about the size of small pearls. They are fully developed in three or four days from the first appearance, and seldom exceed the size of a large pea. They are, however, occasionally larger. At this stage the skin, on which the vesicles form, is of a bright red colour, and the redness extends for some lines beyond the seat of the vesicles. As new groups form, they follow the same course as those which preceded them. About the fourth or fifth day from the appearance of the eruption, the redness diminishes, the vesicles subside and fall off, and the skin beneath is wrinkled. The fluid, which was at first transparent, becomes opaque, in some instances blackish, and several of the vesicles contain pus; finally small, thin, brown, scaly incrustations are formed, which disappear in the course of a few days. Other groups of vesicles appear and follow the same course, and after the lapse of ten or twelve days no traces of the disease remain but the red stains, which slowly disappear. It sometimes happens, however, especially when the eruption is situated on the back, that slight excoriations, and even ulcerations, are produced by the rubbing of the parts against the bed during sleep, which prolongs the disease considerably.

Such is the ordinary course of herpes zona, the form, duration, and progress of which, may, however, frequently vary: as, for instance, the absorption of the fluid may occur about the fifth or sixth day, and the eruption itself disappear by desquamation on the seventh or eighth day. In other cases, especially in persons enfeebled by age or privation, the vesicles acquire considerable size, burst, and produce extensive and painful ulcerations, followed by well-marked cicatrices. In rare cases, particularly in very old cachetic people,

gangrene of the skin sometimes occurs on those parts where the vesicles were formed. We have seen many cases of this disease at the Hospital of St. Louis, but have never seen it accompanied with any of those severe febrile, and especially gastric symptoms, with which it has been erroneously associated. The only phenomena which we have observed as commonly accompanying herpes zona, are slight indisposition, heat of skin, sometimes a slight increase of pulse, a painful feeling of tension in the seat and neighbourhood of the eruption, and in cases of ulceration, severe pain, which continues up to the period of convalescence. Biett never observed any of tho dangerous symptoms alluded to, in upwards of five hundred examples which had come under his notice.

Causes.—Herpes zoster chiefly attacks young persons with a fine delicate skin; men are more subject to it than women. It attacks old people, and appears more frequently in the autumn than in the spring or winter. It occasionally succeeds small-pox, and assumes, in some instances, an almost periodic character. It may also put on an epidemic form. Formerly it was supposed to be hereditary.

Diagnosis.—This affection can hardly be confounded with any other; its vesicular character and the presence of the zone will prevent any mistake from occurring. Sometimes when the zone is beginning to appear, or when it is incomplete, and a few patches only are to be seen in the median line, it may be mistaken for herpes phlyctænodes; but it is often merely necessary to examine the opposite side of the body in those cases, in order to discover other groups of vesicles, and small red patches may be observed between these clusters, indicative of the formation of new groups. Besides, their being confounded would not occasion any inconvenience in the treatment, as they are both fundamentally the same.

Prognosis.—Herpes zona, is, generally speaking, a mild affection. The only instances in which it assumes a severe character, are when it attacks persons of an advanced age; it then may terminate in ulceration and gangrene of the skin, but even in those rare cases it scarcely ever terminates fatally. The appearance of the eruption has often a salutary effect in checking the progress of some other more severe disease, which may co-exist with it.

Guilbrand relates several interesting cases of this nature. We have not met with any of a similar kind.*

Treatment.—This affection, in the majority of cases, requires but very simple treatment; regimen, repose, diluent drinks, lemonade, &c., are all that are required, without any necessity for local or general bleeding. The important point is to prevent the premature rupture of the vesicles; with this view we have been in the habit, for several years, of causing the parts to be sprinkled repeatedly during the day with starch, and then covered with brown paper, which has been oiled, directing the patient at the same time to keep as quiet as possible. Simple baths are beneficial in cases where the inflammation is active, and the constitution irritable. Local applications are, for the most part, useless. Those which have been most strongly recommended are lead, or other astringent lotions. The ulcerations may be assuaged by mild opiate ointments. If the disease appears in an individual whose constitution is broken down by old age, or by some previous disease, tonics should be administered, and the strength recruited by nourishing diet. If gangrene supervene, recourse must be had to tonics and stimulating local applications. It is sometimes difficult to remove the pain, which remains after the eruption has disappeared. Frictions, anodyne applications, and blisters, are frequently required to allay this irritation. MM. Serres and Velpeau have lately recommended the *ectrotic* method, as very efficacious in herpes zona. This is certainly one of those cases in which it has the best chance of succeeding, for it is not so much to subdue inflammation, as to allay the sensibility of the diseased parts, that it is required. However, it is generally of little avail in the treatment of herpes zoster.

Herpes Circinatus.—Herpes Tonsurans.

Herpes circinatus is a very frequent variety, and appears in the form of rings. It is characterized by the appearance of extremely small globular vesicles arranged in the form of circles, the centre of which is free, and the border red. This circular border is often

[* Dr. Thomson says there is a popular conceit, as old as Pliny, but still believed by the common people, which affirms that if the two ends of the zone meet, and the body is surrounded by it, the disease will prove fatal. But many cases are recorded, where it surrounded the body without this result, which contradict the popular belief.—B.]

pretty broad, compared with the centre, especially when the rings are small, and when the colour extends beyond the vesicles the same distance on either side.

Symptoms.—The eruption is preceded by a redness of various degrees of intensity on the parts where the vesicles are about to form. The red colour is usually confined to a surface not exceeding the circumference of a shilling; it sometimes, however, occupies a space about two inches in diameter. The redness is paler in the centre of the small rings. In the centre of the larger ones, the skin preserves its natural colour. The rings are often perfectly round, and occasionally of an oval form. The red circular border is soon covered with a number of small vesicles, set close together, and of a globular shape. The transparent fluid becomes opaque, the vesicles burst, and form small thin incrustations, which soon become detached. The eruption generally terminates about the eighth or tenth day, when the only trace remaining of its existence, is a slight degree of redness, which gradually disappears. This is the usual progress of the disease; but in some cases the centre of the ring becomes inflamed, and produces a slight desquamation, but no vesicles appear. Sometimes the vesicles do not terminate by desquamation, but the contained fluid is absorbed, and they fall off by an almost insensible exfoliation. This occurs principally when the rings are small, and in these cases the vesicles are often so minute, that it requires close examination to detect them. A good magnifying glass will be found very serviceable in these cases. In other instances, the rings are very large, and the vesicles more developed, but the latter rarely ever exceed the size of a millet seed. When the rings are few, not diffused, and developed simultaneously, the eruption rarely continues longer than the tenth day. But in cases where the rings appear in numbers one after the other, the disease may be prolonged for two or three weeks. In individuals of a fine, delicate skin, the redness often continues for a considerable period after the disappearance of the eruption. Although it may appear on any part of the body, it is most frequently seated on the arms, shoulders, chest, and especially the neck and face. We frequently see boys, and particularly girls, of a fair and delicate skin, with herpetic rings about the size of a sixpence on the cheek and chin. There is another variety of herpes circinatus, which has long

been known in England, but only recently observed in France. This affection, first seen by M. Cazenave a few years ago in one of the Colleges in Paris, and since in a number of children, has been described by him under the name of *herpes tonsurans;* it chiefly affects the scalp. This variety is contagious (?) We shall refer to it again when speaking of the diagnosis of porrigo.

[M. Cazenave has recently described a disease under the name of "Herpes Tonsurans," which appears to me to be no other than common ring-worm, the porrigo scutulata of Willan; but as this eruption is exceedingly rare in France, and as M. Cazenave had not a long acquaintance with it when he wrote, the mistake is easily accounted for. Biett and Alibert used to describe, or rather allude to the existence of a contagious form of herpes in their lectures, and this perhaps may have assisted in leading M. Cazenave to believe that the novel and contagious eruption of the scalp, which he saw for the first time in a public school in Paris, was the hitherto undiscovered variety of herpes mentioned by those eminent dermatologists. It is an error which any practitioner might fall into under similar circumstances. I feel assured that a longer acquaintance with the disease in question will convince him that it is not herpes; for that eruption is not contagious in any shape or form.—B.]

Causes.—Herpes circinatus most frequently attacks children of both sexes. It affects particularly fair people, with a fine transparent skin. Sometimes it appears to be produced by cold. It may be developed on the face by stimulating or irritating lotions. No special cause can be assigned for it.

Diagnosis.—The peculiar and well-marked character of this variety would apparently obviate any error with regard to diagnosis. However, a small herpetic ring, the vesicles of which are slightly exfoliated, situated on a perfectly round and red surface, may often be mistaken for a patch of *lepra* without scales; but the depression in the centre, and the prominent border of one, and the even surface and the debris of vesicles on the other, will prevent this mistake occurring to any careful observer. Besides, it rarely happens that there is only one patch of lepra to be seen, and probably others may be found on different parts of the body more strikingly developed. It is, perhaps, a little more difficult

to distinguish herpes circinatus from porrigo scutulata, to both of which the name of *ring-worm* has been applied.* However, one (herpes circinatus) is a vesicular affection, and merely produces scaly crusts; is of short duration, not contagious, and when it affects the scalp never causes loss of hair. The other (porrigo scutulata) is a contagious pustular affection, the progress of which is long and indefinite. It produces scabs which gradually increase in thickness. It only appears on the scalp, and the hair falls off when the rings are developed. It is more difficult to distinguish it from lichen circumscriptus, the rings of which are very little larger than those of herpes; but vesicles are the elements of the latter, whilst the former are characterized by papulæ.†

Treatment.—The treatment of herpes circinatus is nearly the same as that of the other varieties, except that alkaline lotions may be advantageously employed in this form. The frequent application of saliva will often allay the smarting which accompanies the eruption on the face, and also the inflammation which attends it. Astringent lotions, composed of alum, or sulphate of zinc, may also be used with advantage. When it affects several parts of the body at the same time, laxatives and alkaline baths should be administered.

[If herpes circinatus, or "herpes tonsurans," according to the new nomenclature, were in reality the disease known in this country by the name of *ring-worm*, a different plan of treatment would be required, to that described in the text. The object would be to destroy the vegetable parasite, and for that purpose no other remedy would be preferable to that recommended by Dr. Jenner, namely, sulphurous acid. But as it certainly is not the affection which English practitioners know under the designation of common ring-worm, the treatment given above may be left undisturbed. No form of herpes attacks the scalp as an original disease.—B.]

Herpes Iris.

Herpes iris is an extremely rare form of this disease, which appears in small vesicular groups, perfectly rounded, and forming

[* In the last edition, M. Cazenave says that mistakes are sure to arise from giving the name of *ring-worm* to two diseases so opposite as herpes tonsurans and porrigo scutulata. He is, however, mistaken in supposing that modern English writers describe any form of herpes by that name.—B.]

† [Eczema, complicated with herpes, is a common disease of sheep. Simple herpes attacks the horse and dogs more frequently.—B.]

four erythematic rings of different shades of colour. The patients often compare them to small cockades. Bateman was the first to describe this variety correctly, and also to place it in the genus herpes.

Symptoms.—It appears first in small patches, which are soon replaced by rings of different shades of colour. About the second day a vesicle forms in the centre, which is speedily surrounded by many others of a smaller size. In the course of two or three days the central vesicle is flattened ; the fluid it contains becomes opaque and of a yellowish hue ; the rings are more developed, they now form four distinct circles, which successively surround the central vesicles, so as to form a disc about the size of a shilling. The first and central ring is of a reddish brown tint, the next a whitish yellow, the third and narrowest a deep red, and the fourth or external circle presents a pale rose-colour, which is blended in the colour of the surrounding skin. These rings are often very numerous, but the various colours are not always so well marked. The third is the narrowest ; each may be entirely covered with vesicles, but they are generally more numerous on the first. They terminate about the fifth or sixth day by the absorption of the fluid, and by slight desquamation. Sometimes the vesicles burst and form small thin lamellæ, which soon fall off. Herpes iris may appear on any part of the body, but its most frequent situations are the face, the hands, the instep, the fingers, the neck.*

Causes.—Herpes iris most frequently affects children, females, and persons of a fair skin, without any appreciable cause. It may co-exist with other forms of herpes.

Diagnosis.—The only disease with which it can be confounded is roseola annularis. The latter, however, differs from the former, by

[* I am indebted to Mr. Avery for a beautiful example of herpes iris. The eruption appeared on the abdomen, about two inches to the left of the umbilicus, in a healthy, robust young man, about twenty-two years of age. It occupied a space as near as possible of the size of a crownpiece. There were seven concentric rings, covered with minute vesicles, at pretty equal distances from each other, except the outside one, which was at some distance from the others. The different colours of the various rings, contrasting with each other, presented a very singular and striking appearance. There was no trace of eruption on any other part of the cutaneous surface. The only treatment required consisted in keeping the clothes from rubbing against the parts, and a warm bath.—B.]

the larger size of the rings, which sometimes exceed the circumference of a crown-piece, and by the absence of vesicles. Herpes iris may especially be confounded with this form of roseola, in cases where the vesicles have burst and disappeared; but generally, on closer examination, the debris of a vesicle may be detected, which will prevent this mistake.

Treatment.—This affection is so mild, that it scarcely requires any particular treatment. The remedies suited to herpes circinatus will also answer in this case, if any be required. Herpes iris is so rare, that Biett had seen but very few examples, amongst the vast multitude of cases of skin diseases which came under his observation at the Hospital of St. Louis during a long series of years. We have seen a beautiful example of this affection in his wards, in which the ring was situated in the middle of the forehead.

[The different varieties of herpes are in the majority of cases the result of disturbance of the digestive functions. Sudden transitions of temperature are occasional causes, as are also the imbibition of cold fluids, ices, &c., when the body is heated, and the skin perspiring. The treatment is indicated by the causes. Local remedies, such as cold lotions, or other repelling agents, should be avoided. The only use of external applications is to prevent friction of the parts against the clothes. M. Cazenave recommends for this purpose, anointing the patches with olive oil, and then sprinkling them with powdered starch, which protects the vesicles from any mechanical cause of ulceration. M. Briquet recommends collodion as an external application in herpes zoster, and says that it not only arrests the progress of the disease, but stops the severe pain which accompanies it. I cannot recommend this remedy in any form of herpes.—B.]

SCABIES.

Syn.—*Psora; Gale* (French); *Scabbia* (Italian); *Kratze* (German); *Sarna* (Spanish); Itch.

Scabies or itch is a cutaneous affection caused by an insect, the *acarus scabiei*, and characterized by smart itching, with the formation of vesicles more or less distinct from each other, acuminated,

transparent at their summits, larger at their base, which is of a rose colour, and from which extends generally a burrow from one to two or three lines in extent, sometimes straight, and at other times crooked, at the extremity of which the insect is found. Its favourite seat is the intervals between the fingers and the wrists.

The itch was known to the ancients; but, in Greece, and among the Romans, under the name of *ψώρα*, and of *scabies*, were confounded several other diseases than those produced by the presence of the insect, their names having been derived from the external characters.

Avenzohar, who was born in Spain, where scabies existed in an endemic form, is the first physician who expressly mentioned the itch insect, he doubtless having often witnessed its extraction. But he did not point out the connexion between the insect and the disease, having treated of the itch itself in another part of his work.*

From Avenzohar, who wrote in 1179, to Moufet, whose work appeared in London in 1634 (*Insectorum sive minimorum Animalium Theatrum*), no mention is made by authors of the acarus scabiei. Moufet gives a very good description of it, and of the burrows which it makes. Hauptmann of Leipsic described it, and gave a drawing of it, which resembled a cheese mite, twenty years afterwards. Since that time it has been described successively by Hafenreffer (1660), Ludovici (1678), Morgagni and Etmuller (1692), and by Bonomi and Cestoni (1683).

Linnæus tended rather to mislead than to throw light on the subject by speaking of the acarus scabiei as though it were the same as the acarus farinæ, describing it under the name of *acarus exulcerans*. His errors, however, have been corrected by Geoffroy, Gmelin, de Geer, Fabricius, Wichmann, and Latreille.

Fabricius tells us that the *acarus scabiei* is not confined to the southern latitudes, for it may also be found in the vicinity of the Poles. "Habitat in vesicula scabiei Groenlandorum, qui illum acu eximere scientes, mihi miranti, ut vivum animal incedentem ostenderunt. En Groenlandos entomologos!" (*Fauna Groenland*).

[Joseph Adams published in 1807, in his work on Morbid Poisons,

[* There is a proverb in Spain, "Ser mas viejo que la sarna,"—it is older than the itch.]

an account of the *acarus scabiei.* The insect was shown to him at Madeira by a nurse, who taught him how to extract it.

The existence of the insect was still a matter of doubt in France, when, in 1812, Gales, formerly an apothecary of the Hospital of St. Louis, instituted experiments on more than three hundred persons affected with itch, and exhibited to a large body of physicians, and even to a committee of the Institute, more than three hundred insects, of which he even described the habits, and of which a drawing was made. The insect exhibited by Gales, however, proved to be the *cheese mite*, and no insect could be found in the vesicles, as stated by him. We, amongst others, sought for the acarus in vain, and one of us took the itch in so doing. Incredulity succeeded this exposure, and continued to prevail until 1834, when Renucci, then a pupil at the Hospital of St. Louis, pointed out the manner of finding the acarus, showing that it must be sought for not in the vesicles themselves, but by the side of them, and at a short distance from them. It is sometimes found about a quarter of a line from an isolated vesicle, presenting a small white point under the epidermis, from which it can be raised by the point of a needle; at other times it is found at the extremity of the small burrow, which is one or two lines in length, and even longer, extending from the vesicle.

Since that period, Raspail has given a very good description of the insect, with excellent drawings of it, and Albin Gras has studied the action of certain articles on it to ascertain what will destroy it the soonest. He found that it lived three hours in pure water; two hours in olive oil; one hour in a solution of sugar of lead; three quarters of an hour in lime water; twenty minutes in vinegar, alcohol, and an alkaline solution; twelve minutes in a solution of sulphuret of potassa; nine minutes in spirits of turpentine; from four to six minutes in a concentrated solution of hydriodate of potassa. It survived one hour in the flour of sulphur, and sixteen hours in the vapour of sulphur under a watch-glass. The solution of the hydriodate of potassa is therefore the most powerful agent which can be used externally with safety. Albin Gras has extracted them alive from a patient who had taken three sulphur baths, while he has frequently found them destroyed after a single friction with the ointment of Helmerich.

Scabies is never caused by inoculation with the fluid from the vesicles, nor by that from any other of the eruptions produced by the insect, but only by the insect itself. We agree with Hebra that the transference of the disease from one place to another, is produced entirely by the patients in scratching themselves, and dislodging the insects, and scattering their eggs.

The acarus scabiei is a small, round, greyish body, sometimes in motion, and at other times at rest. With good sight, and especially with a magnifying glass, the head and fore legs of the insect can be easily distinguished. Under the microscope, it presents an oval body, the back somewhat convex, on which are marked numerous fine curved lines, parallel with each other, and of unequal length in the different groups. Under the abdomen are eight legs, four of which are in front, and have at their extremities a sucker of trumpet shape, with hairs at their base. The four hind claws are without suckers, and terminate with a hair of greater or less length. The head is granular, covered with fine hairs, and has a trumpet-shaped protuberance, shorter than those on the fore legs, with a hair longer than itself on each side.*

Causes.—It is settled that the acarus is the sole cause of itch. It can be communicated even from a dead body, as long as the insect is alive.

Scabies is never epidemic; and is only endemic among uncivilized nations, and in countries where the habits of the people are filthy.

Youth, the sanguineous temperament, the male sex, handling of woollen substances, the seasons of spring and summer, tropical climates, neglect of cleanliness, are predisposing causes of the disease. It occurs more frequently in children and youth, doubtless because there are more of these ages than of any other.

It is much more frequent among males than among females, probably because the former are more exposed to it. Those of lymphatic and sanguineous temperament are much more frequently affected with it than those of the bilious temperament, in which it is of rare occurrence; because this temperament itself is comparatively less frequently met with.

[* Mr. Erasmus Wilson has given a minute anatomical description of the itch-insect in his treatise on Diseases of the Skin, which would be out of place in a manual of this form.—B.]

Seat.—Scabies affects especially the hands, the spaces between the fingers, the front part of the wrist, and the limbs in the line of flexion. It is never seen on the face. It is not unfrequently found on the feet.

Progress and Symptoms.—The period of incubation of itch, or the period at which it appears after exposure to direct contagion, varies from several days to several weeks, and even months.

In *children* it usually shows itself at the end of four or five days; but the time is longer in feeble and delicate children, while it is much shorter, even only two days, in very strong and robust children.

In *adults* the time varies, as before mentioned, and is always shorter in spring and summer than in winter. It continues longer in old persons and those labouring under chronic disease, remaining even for several months. The vitality of the dermoid system appears to be the principal cause of these remarkable differences.

Itching over different parts of the body, and especially between the fingers, and on the front part of the wrists, with very slight chills, and a general irritation of a peculiar kind, usually precedes the eruption of vesicles, and increases with their appearance. This itching, and the development of vesicular, erythematous, papular, and pustular eruptions, in different degrees, are the symptoms of itch which discover themselves.

The itching sensibly increases towards evening, particularly when in bed, and also under the influence of all causes which increase the cutaneous circulation, as heat, exercise, stimulating drinks, &c. Small papular elevations soon begin to appear, of a pinkish tint in young and vigorous persons, on the top of which a small transparent vesicle soon forms. From this vesicle, when opened by the nails of the patient, a very small quantity of clear fluid like water, escapes, and forms, in drying up, a small, rough, friable, and slightly adherent scab.

The vesicles are accompanied by small burrows, made by the insect in his progress under the epidermis, well described by Hebra, which resemble the fine scratches that the point of a pin would make drawn lightly over the epidermis. These burrows have one extremity corresponding with the vesicle, and another marked by a small, round swelling, where the insect is found. The appearances

of these burrows vary with their duration, and with the age and occupation of the patient. It is only at the end of the burrow, opposite the vesicle, that the insect is to be found, from which it may be extracted with the point of a fine needle. The burrows are usually found on the hands, in the intervals between the fingers, the wrists, the axillæ, the inside of the thighs. Hebra has seen them on the feet, even on the soles, on the penis, scrotum, and sometimes about the knees. Sometimes it is very difficult to find the insect, and occasionally impossible, and always requires some practice.

The vesicles left to themselves rarely, if ever, become pustular; but when irritated by the nails, especially in young and vigorous patients, and in those accustomed to the use of stimulants, they may assume a pustular character; and pustules of *impetigo* and *ecthyma* will then be found among the original vesicular eruption.

Scabies varies in its progress and development with the age, constitution, temperament, and health of the patient, and with the season of the year, climate, &c. In the young and robust, and those in full health, it spreads rapidly over the surface, and the whole body is sometimes more or less covered with different kinds of eruptions, without any decided characteristics, mingled with brownish scales, with more or less redness of the whole skin; and to these are sometimes added large pustules of ecthyma and boils. But whatever may be the extent of the eruption, it is never attended with those dangerous results which have been attributed to it.

Terminations.—Itch never terminates spontaneously, but may last for years, and even for the whole life, as is the case in some countries; but in these cases, the skin becomes accustomed to the presence of the disease, and it causes but a moderate degree of irritation.

We admit but one kind of itch, that produced by the acarus scabiei, and consider the vesicular form of eruption as the only one belonging properly to it.

Diagnosis.—Strictly speaking, the existence of itch can only be conclusively proved by the presence of the insect; and the certainty of this is established by finding it, and by the marks it leaves. The vesicle is sufficiently characteristic in a great majority of cases to establish the diagnosis.

The eruptions most likely to be confounded with scabies are *eczema simplex* and *prurigo*. But the vesicles of *eczema* are flattened, while those of scabies are acuminated, and rest on a reddish base, which is never the case with those of eczema. In *eczema*, also, they are grouped, and often run together, while in scabies they are always less confluent, and usually distinct. The itching produced by *eczema* is a kind of general smarting, a burning kind of itching; that of scabies is not of the same character, and has well marked exacerbations. Also, *eczema* is not contagious, at least very rarely so. Some individuals have a vesicular eruption every year after having been cured of itch: this is not scabies, but eczema; generally eczema simplex. This is doubtless owing to some modification of the innervation of the skin originally produced by the scabies.

The elementary form of *prurigo* is papular, and its usual seat is the back, the shoulders, and the line of extension of the limbs. The papulæ, which are almost always torn by scratching, have their tops covered with a little clot of dried blood, of a black or dark colour, which differs entirely from the small, yellowish, friable scale which covers the vesicles of scabies when they are torn. The itching is more severe, burning, and insupportable in *prurigo*, which is, besides, never contagious.

Lichen simplex might also be mistaken for scabies; but it is characterized by papules, and those are usually very near together, which is rarely the case with the vesicles of itch; the papules of *lichen* are of the same colour as the skin, while the papules which precede the vesicles of itch are of a reddish colour, as is also true of the vesicles themselves at their base. When lichen affects the hands (which is the form most apt to be mistaken for itch), it occupies the dorsal surface, and not the spaces between the fingers as itch does, and also covers the external surfaces of the limbs, and the itching is less severe than that of scabies. In *lichen urticatus*, the itching is very severe, but the eruption always continues papular. None of the varieties of lichen are contagious.

All these different eruptions may co-exist with scabies, and thus render the diagnosis obscure, which must then be founded on the presence of the insect, or of the burrows which it makes.

Scabies may occur at the same time with syphilis, scrofula, and

pellagra, without their being influenced at all by each other. In some very rare cases, scurvy may impart a livid tinge to the eruptions of scabies, and when these are numerous, they may soon become covered with brownish scabs.

Treatment.—Scabies is only cured by the extraction or the destruction of the insect which causes it. The duration of the disease, under a treatment capable of destroying the acarus without increasing the irritation of the skin, varies from six to twelve days its complications may prolong the cure for months.

A great variety of remedies have been recommended for the cure of itch: we can only mention those most used, and which have proved most beneficial. Mercurial preparations, including the citrine ointment, besides almost always developing other eruptions, may cause swelling of the salivary glands, salivation, and even glossitis, and should be renounced entirely.

The *liniment of Jadelot* is often useful, although it gives rise to eczematous eruptions, the mean duration of which is fifteen days; the same is true of the *lotion of Dupuytren*, which consists of four ounces of sulphuret of potash, dissolved in a pint and a half of water with the addition of half an ounce of sulphuric acid; the affected parts to be washed with it twice daily. This wash causes painful smarting, especially in irritable persons, and the mean duration of treatment is sixteen days.

Of the great variety of ointments used we have long given the preference to that of *Helmerich*, a modification of which Biett employed almost exclusively. It is known under the name of *sulphuro-alkaline ointment*, and is composed of two parts of sublimed sulphur, one part of subcarbonate of potash, and eight parts of lard. The mean duration of treatment is twelve days; but it has the disadvantage of discolouring the clothes so that they cannot be restored.

More recently agents have been used to destroy the acarus, and in this way cure the disease more speedily. Dr. Hebra, of Vienna, found that a solution of common salt, of corrosive sublimate, of arsenic, of the sulphates of iron, and copper, and zinc, or a decoction of the leaves of tobacco, or hyoscyamus, or belladonna, or hellebore, either black or white, would destroy the insect in from two to twenty hours. He prefers *Wilkinson's Ointment*, modified

as follows:—prepared chalk ℨ iv.; sulphur and tar āā ℥vj.; soft soap and lard āā ℥ xvj. Dr. Hebra considers the addition of the chalk of great importance in acting mechanically to break up the burrows.

The remedies used, of whatever kind, should be applied directly to the parts occupied by the insect, as they do not act by absorption. Dr. Hebra has the frictions made upon the extremities, where, according to his view, the acarus almost exclusively locates itself, and in occasional cases on parts to which he suspects it may have extended itself; and we have ourselves, for a long time past, limited the application of topical remedies to certain parts in preference. *Pihorel's* plan of treatment consisted in making, twice a day, frictions in the palms of the hands, with pulverized sulphuret of lime, mixed with a very small quantity of olive oil.

The problem to be resolved in the rational treatment of scabies is to cure quickly, with few or no complications, at as trifling an expense as possible, and without injuring the clothes. We think this desideratum is more likely to be accomplished by lotions than by ointments. In the endeavour to accomplish this object, one of us, after a great number of trials of different remedies on a large scale, has selected the two following formulæ as those which have yielded the most satisfactory results:—

1. *Alcoholic Aromatic Lotions:*

Essence of peppermint,
" of rosemary,
" of lavender,
" of lemon, āā 4 to 6 drops.
Alcohol . . . . ℨ iss.
Weak infusion of thyme, 3 quarts.

The mean duration of this treatment is eight days; it is a desirable plan in private practice, and causes no serious complications, but is too expensive for hospital use.

2. *Iodurettecl Lotions:*

Iodide of sulphur,
Iodide of potassium, āā ℨ iss.
Water . . . . 1 quart.

The mean duration of this plan is six days.

Whatever the lotion employed, it is necessary not only to wet the affected parts, but to prolong its application, so as to produce that kind of maceration which is required to destroy the insect.

Baths are useful auxiliaries to the treatment, and one should be taken at least every two days. Sulphur vapour baths are too fatiguing for the patient, and the mean duration of treatment is too long; but they often are useful aids to other means.

Accidental complications must be treated by appropriate means when they occur. As these are most usually produced by the agents used to destroy the acarus, nothing more is required than to suspend the use of such articles for the time.

Patients must also be kept by themselves, and their clothes disinfected; and after the treatment is finished, warm baths should be taken.

[I had the pleasure of assisting at a series of experiments lately conducted at the Hospital St. Louis, Paris, by M. Bourgignon, with a view of improving the treatment of scabies and other cutaneous diseases. In the present instance, the immediate object in view was to ascertain if the itch could not be speedily cured without the use of unguents, by immersing the hands, when those parts only are affected, in a solution of some of those remedies which are destructive to the acarus, and thereby substitute a cleanly and more agreeable method of treatment for one that is universally admitted to be filthy and disgusting. By permission of M. Cazenave, several patients were removed from his wards to the amphitheatre where the experiments were conducted. They were all contaminated with itch. One patient, in whom the disease appeared most evident, was selected for examination. His hands, being thoroughly cleansed with soap and water, were examined, and several acari (sarcoptes) were readily removed, which seemed active and lively when placed on a watch glass, and viewed through the microscope. M. Bourgignon, having previously tested the therapeutic effects of a variety of remedies, selected stavesacre as being the most effectual for the present purpose.

Two vases, filled with a strong alcoholic extract of stavesacre were placed on a bench on either side of the patient, whose hands were now immersed in them, and retained there for half an hour. At

the expiration of that period they were removed, again examined, and several acari extracted. In this instance the remedy was not entirely effectual, as some of the insects were still alive, although dull and inactive. The hands were again immediately immersed in the solution for half an hour longer, making one hour altogether, when no living acarus could be discovered after careful examination. Those that were removed and placed under the microscope showed no signs of life. On the following day similar experiments were tried on other patients, and with the same success. On this day, the patient who had been first subjected to the new remedy was re-examined. He said he was entirely free from itching; the skin was much paler, and no living acarus could be found on the parts to which the alcoholic extract had been applied. In the majority of cases the insect was destroyed in one hour after the application of the curative agent.

M. Bazin recommends friction over the entire surface of the body with the following ointment, as preferable to lotions, and as shortening the period of treatment to four days. The patient's clothes may be disinfected by placing them in a hot oven.

The treatment is to be commenced and concluded with a warm bath, the frictions to be made every six hours, for forty-eight hours. He uses the ointment of Helmerich, and also the following:—℞ Flowers of sulphur, ℥ ss.; common salt, ʒ j.; lard, ℥ ij.—(*L'Abeille Méd.*, Nov. 3, 1850.)

Professor Bennett, of Edinburgh, reports cases of scabies cured by inunction with lard alone, the parts being also kept covered with oiled silk, and thinks that the efficacy of sulphur ointment depends almost entirely upon the unctuous matter, which causes the death of the acarus by stopping up its respiratory pores.—(*Monthly Journal Med. Sc.*, Jan. 1850.) Olive oil has also been used with similar results. Frequent lotions through the day, with a solution of chloride of lime (ʒj. to a pint of water), are preferred by one writer to all other means.

Emery gives the following recipe for an ointment used at the St. Louis Hospital:—℞ Brown soap, ʒ j.; table salt, ℥ ss.; alcohol ʒ j.; vinegar, ʒ ij.; chloride of lime, ʒ ss. He says that it causes no irritation, does not soil the clothes, has no unpleasant smell, cures in a short time, and is cheap.—(*Bulletin Génér. de Thérap.*, Mai, 1836.)

Dr. Bulkeley says the combination of sulphur with soap, of a kind and quality to suit the taste and the means of the patient, forms a convenient and effectual mode of applying that remedy. He has combined it with the common soft soap in dispensary practice with good effect.—B.]

BULLÆ.

Bullous Eruptions.

The diseases which belong to this order are characterised by elevations of the epidermis, sometimes of considerable magnitude, caused by the effusion of serum or a seropurulent fluid. These tumours are called *bullæ* or blebs; they are of a round form, have a broad base, and vary in size from a pea to that of a goose-egg, which distinguishes them from the *vesiculæ*, the latter never appearing so large.

The bullæ and vesiculæ might, with strict propriety, be included in the same class. For it seems absurd to separate them simply on account of difference in size.

The eruptions which come under this denomination are two, pemphigus and rupia.* Rupia has been classed by Bateman amongst the vesiculæ; but we agree with Biett, that it may be very appropriately placed under the head of bullæ. Analogous phenomena are sometimes observed in diseases foreign to this order, but their development is purely accidental. They are simple complications, the elementary characters of which are essentially different from those of the diseases under consideration. Thus in herpes zona, some of the vesicles running together form genuine small bullæ; but the vesicles properly so called are much more numerous, and besides, all their characters are very distinct from those of the bullæ. The development of bullæ in erysipelas is also accidental, that disease being likewise characterised by well-marked symptoms. Although the diseases belonging to this order may assume an acute form,

[* A peculiar form of disease, possessing many of the characters of rupia has been described by Irish writers under the name of "Button Scurvy," a short description of which will follow the chapter on Rupia, although it scarcely belongs to this order.—B.]

they are more frequently chronic. They appear successively on every part of the body; they spread over a large surface, but never over the entire skin at the same time. They are generally confined to the extremities, most frequently to the lower. Their duration varies from a fortnight to several months. Sometimes they continue for an indefinite period.

Symptoms.—The invasion of these affections is frequently preceded by a certain degree of redness of the skin, but in many instances this phenomenon does not occur, and the bullæ or blebs appear suddenly without any precursory symptoms whatever. The cuticular elevations are small at first, but they gradually enlarge during the first twenty-four hours, until they attain a considerable size. The bullæ are tense when they first appear; but as soon as the fluid thickens they become flaccid, as if only half-filled. In all cases they burst sooner or later, the serum becomes effused on the skin, and they are succeeded by incrustations of variable thickness. The bullæ which are developed on the face are in general very small, they burst early, and are succeeded by crusts analogous to those of impetigo. In some cases the bullæ are succeeded by ulcerations, sometimes superficial, but more frequently deep-seated, as in rupia.

Causes.—The causes of these affections are very uncertain. They appear most frequently in persons of a broken-down constitution.

Diagnosis.—These diseases are generally easily recognised. The vesiculæ, which alone could be mistaken for them, may be distinguished by their smallness. The diagnosis is more difficult when the bullæ have burst, and are succeeded by thickish crusts. However, the peculiar characters of each will enable them to be distinguished at a glance, especially as the bullæ invariably leave marks after them. We have to depend chiefly on negative characters in these cases, in which considerable experience is necessary to form a correct diagnosis.

Prognosis.—The bullæ are sometimes dangerous, especially when they occur in aged persons, or in those of a broken-down constitution. In these cases they frequently accompany a chronic disease of some internal organ, particularly of the liver.

Treatment.—These affections occasionally, but rarely, require an

antiphlogistic plan of treatment. Sometimes they require tonics, the preparations of iron, quinine, hydriodate of potash, &c.; and lastly, particular attention should be paid for a considerable time after the disappearance of the disease to the patient's hygiéne.

PEMPHIGUS.

SYN.—*Febris bullosa; Febris vesicularis; Hydatis; Pompholix; Phlyctena; Bulla;* Water blebs.

A cutaneous affection has been described under the name of Pemphigus, (from Πέμφιξ, an air bubble,) characterised by the appearance, upon one or more regions of the body, of large bullæ, two inches or more in diameter, containing at first limpid serum, which soon becomes reddish. They are isolated, but numerous, and prolonged by successive eruptions, always terminating in slightly thickened crusts and superficial excoriations. Willan and Bateman have denied the existence of pemphigus as an acute affection, but admit and describe its appearance in a chronic form under the name of pompholix, "an eruption of bullæ without surrounding inflammation and without fever." Gilibert has, however, in his excellent monograph, established the identity of pemphigus as a distinct affection, and Biett had long entertained a similar opinion. It may appear, therefore, in two forms, the acute and chronic. Acute pemphigus may be confined to a single region, or be so diffused as to occupy nearly the entire surface of the body. In these instances the bullæ are almost always separate from each other; we very rarely find them confluent.

Symptoms.—Sometimes the precursory symptoms are of a mild character, and consist merely in slight indisposition, accompanied with a smart itching of the skin, and slight acceleration of the pulse. In other cases the skin is dry and burning, there is much thirst, quick pulse, anorexia, and rigors. This state continues twenty-four to forty-eight hours, and sometimes even three days. The eruption then commences in the form of small red circular patches, which gradually increase, and become covered with bullæ. The latter are produced by the effusion of serum under the epidermis, over the whole or part of the inflamed base. Sometimes these red patches become immediately covered with bullæ, on other occasions they are not developed for several hours. In some instances

the bullæ cover all the inflamed surface, and are then small, transparent, isolated tumours, varying in size from that of a pea to that of a filbert, and of a nearly rounded form. In other cases, on the contrary, the epidermis is not raised over the whole of the inflamed surface, but merely at the centre, and a little way round it. Thus we sometimes observe in a spot the size of a shilling, a single bleb not larger than a pea, whilst in others, on the contrary, an areola of one or two lines only surrounds the isolated tumour. There are also cases in which we find red patches here and there without any bullæ; but on passing the finger along the surface, a slight elevation is perceived, and the epidermis is easily detached by friction, in consequence of the subcuticular serous exudation. The red colour of the areola is very bright for the first four days; the colour of the patches that do not contain bullæ is much paler; in the interstices the skin remains perfectly sound. This redness has been denied altogether by some writers. Sometimes several of the bullæ unite and form a tumour, the size of a goose-egg.

When the bullæ have attained their full growth they begin to fade, and the serous fluid becomes opaque. They sometimes burst within twenty-four or forty-eight hours. They are replaced by small, thin, brownish incrustations, which begin to form before the redness disappears, or by small, dry, whitish lamellæ. The eruption may appear in two perfectly distinct forms:—the bullæ may be developed successively; or may appear altogether, resembling the eruptive fevers. The febrile symptoms which accompany this disease are sometimes so very slight, that the patient does not require to keep his bed. On other occasions they are exceedingly severe. We have seen a patient at the Hospital of St. Louis in whom this affection was accompanied with severe gastro-intestinal irritation, pulmonary catarrh, ophthalmia, and inflammation of the urethra. The tongue was swollen and the lips were covered with sordes. All these symptoms, together with the eruption, disappeared in the course of a month. The duration of acute pemphigus is ordinarily short, from one to three weeks.

It sometimes affects children, when the symptoms are the same as the foregoing. The *Pemphigus infantilis*, or pemphigus gangrenosus of nosologists, seems to us to belong more properly to *rupia escharotica*. M. Krauss has, however, established pretty clearly,

in his Thesis, "De Pemphigo Neonatorum," the existence of this disease;* and we have recently seen a case, with M. Trousseau, in which the soles of the feet of an infant were covered with bullæ containing a sero-purulent fluid, and surrounded with a violet-coloured areola. The infant was otherwise perfectly healthy. It frequently appears in lying-in hospitals; and we coincide with the opinion of M. Paul Dubois, who regards the pemphigus of new-born infants as a rare and serious form of congenital syphilis.

Pompholix solitarius (from Πομφόλυξ, a bubble filled with water) of Willan appears to be a variety of acute pemphigus. The appearance of the bullæ is preceded by a pretty smart itching; their course is rapid, and several ounces of serum are speedily effused under the epidermis. The bulla (only one appears at a time) opens in the course of forty-eight hours, and produces a slight excoriation. One or two days afterwards another bleb forms near the first, and pursues the same course. They frequently reappear twice or thrice in this manner, so that the disease may be prolonged for eight or ten days. This variety may also exist in a chronic form. It is, however, an exceedingly rare affection.

Chronic pemphigus, (*Pompholix diutinus* of Willan,) is a more common disease than the acute form, and appears more frequently in adults and in old men, than in women. This affection often spreads over the whole body; at other times it is confined to a small surface. Febrile symptoms never supervene, as in the acute form, unless the eruption becomes very much extended and prolonged. A few days before the bullæ appear, the patient feels a slight degree of lassitude, languor, and pains in the limbs. A number of small red spots, accompanied with slight itching, then supervene. In the centre of each little patch the epidermis becomes elevated. The base of this cuticular elevation gradually extends so as to form, in the course of a few hours, an irregularly-shaped bulla, the size of a filbert, or even of a walnut. At the end of two or three days the bullæ are as large as an egg, and sometimes larger. Owing either to their distended state, or the movements of the

[* Dr. Krauss was the orthopedic surgeon to the Blenheim Dispensary during my connexion with that institution, and from several conversations upon this subject which I have had with him, I have no doubt his statements are the result of careful observations.—B.]

patient, some of these burst, and the serum is effused over the skin. The epidermis shrivels and is corrugated, or else it becomes partly detached, folds upon itself, and exposes an inflamed and slightly excoriated surface, which sometimes terminates in slight exfoliation.

Towards the third or fourth day, according as they lose their transparency, and as the serum becomes reddish, the bullæ which have not burst shrivel up. The epidermis assumes a whitish tint first, then becomes opaque, and finally terminates in small flat brownish incrustations. New bullæ form close to the old ones, and pursue the same course, so that we may observe at the same time bullæ filled and distended with semi-transparent serum, laminated crusts, and irregularly-formed red patches, slightly excoriated, and of variable size. Moreover, the skin of the patient, in whom all these various phases of the disease, from the formation of the bullæ to their complete disappearance, are developed, presents a very peculiar and remarkable appearance. Such is the ordinary course of chronic pemphigus, which may thus be prolonged for months.

In some rare cases, pemphigus spreads over the whole surface of the skin at the same time. The bullæ then coalesce, the contained fluid thickens, and becomes purulent; and presently the whole body is covered with yellow crusts, which have been mistaken for those of impetigo. These crusts are not thick, and present certain peculiarities both in their form and in their extent, which denote that they have proceeded from bullæ. Some of these incrustations are convex at the centre, and are shrivelled and wrinkled at the circumference. This variety usually appears on the face, which is not a common situation of pemphigus. The first-formed bullæ are sometimes preceded by red circular spots, as in the acute form of the disease; but this will not occur with the succeeding eruptions; in some cases the reverse may take place; while in others successive eruptions may have erythematous borders.

[The late Dr. Whitly Stokes, of Dublin, described an epidemic form of *pemphigus infantile* or *gangrenosus*, which appeared in Ireland at the close of the last century, in the following words:—

"The approach of this disorder is sometimes, though rarely, denoted by a livid suffusion, like that of erysipelas, slightly elevated. One or more vesicles appear, mostly larger than the best distinct

small-pox; these increase for two or three days, burst, and discharge a thin fluid, having a disagreeable smell; limpid in most cases, sometimes whitish, and sometimes yellowish, the latter less dangerous; usually the weaker a child's constitution is, the thinner is the matter. Before, or after breaking, the vesicles run together, the sores become painful with loss of substance, and a thin, fœtid, ichorous discharge; the edges of the ulcer are undermined, and it spreads quickly. The more usual seats of the disease are behind the ears, sometimes on the hands or feet, on the private parts (seldom in the arm-pit), the breasts, folds of the thighs, lower belly, on the inside of the mouth or lips. The disease, however, it is said, seldom passes from the inside to the outside of the mouth. In the progress of the disorder, the ulcers enlarge rapidly, with remarkable fœtor, a very great discharge, and livid edges. If the sores are behind the ears, they destroy the connexion of the posterior cartilage with the cranium; they spread to the meatus auditorius; to the eyes, the sight of which seemed in a few cases to have been destroyed one or two days before death; and they sometimes extend to the vertex. The constitutional disturbance that accompanies this disease seems principally the effect of irritation. When the vesicles burst, the child begins to grow peevish and fretful, pale, loses its appetite, and the flesh becomes remarkably flabby. The periods of this disorder are not very regular; but it often happens about the eighth day that the pulse sinks, lividity spreads over the whole sore, and the fœtor and the discharge increase greatly. The smell is so strong as often to be perceivable at a distance from the bed. The discharge, in one case, where the ulcers affected the arm-pits and breasts, was such, that the linen was completely loaded several times a day. Death takes place about the tenth or twelfth day, often preceded by convulsions, sometimes by extreme debility. Patients are apt to relapse soon after the sores are skinned over.

The causes of this malady are rather obscure. It seems exclusively confined to children. Dr. M'Donnel saw twenty cases before the year 1795; all the patients were under four years old. Dr. Spear observed that it was confined to children from the age of three months to that of five years; but it has been observed near Dublin in children of nine years old. It attacks the finest children

in preference; the children of the poor more frequently than those of the affluent; and those who live in damp situations seem more peculiarly subject to it than others. The disease is more prevalent in summer than in winter. It appears to be infectious, though obscurely so in general; but, in the year 1800, Dr. Spear observed it to spread epidemically. It has been said that the disease is oftener given to the younger from the older, than the reverse. It would be interesting to determine whether it attacks the same person twice; it certainly is apt to return after apparent recovery. Children, as is well known, are subject to excoriations behind the ears, which sometimes produce formidable sores; these may possibly, in a few cases, resemble the disease we speak of, in its advanced stages; but, in a great majority of cases, these excoriations are far less rapid and dangerous than the complaint in question. On the other hand, the swine-pock (varicella) resembles this disease in its first stage: but the fever rarely precedes the eruption in white blisters, and the pustules of varicella dry readily.

This is a disorder of great danger, but of various progress in different individuals. It often happens that a fatal change takes place about the eleventh day. The unfavourable signs are, the rapidity with which the sores spread; the blackness, first at the edges, after some time, spreading over the whole; the quantity and fœtor of the discharge; its colour, the paler being the most dangerous. It has been alleged, by empirical practitioners in this disease, that, after the blackness had covered the whole sore, death was certain; but I have observed the blackness to go off, although it has spread over the whole surface of the sores. When this appearance abates, livid streaks generally remain for a day or two. When a favourable change is effected in bad cases, the diminution of the fœtor and discharge were the first signs of the abatement of the malady; appetite was afterwards restored."]

[A variety of pemphigus is described by M. Cazenave in his lectures, intermediate between the form in which the bullæ appear successively, and that in which they are continuous, which constitutes a confluent eruption, appearing either at intervals or continuously, and attacking the whole surface of the body. The bullæ are flattened, and contain an opaque serum, which hardly raises the epidermis, and soon hardens into yellowish, scabby lamellæ. The

eruptions succeed each other so rapidly that the epidermis not being in a condition to form new bullæ, the disease is reduced to the secretion of a fluid which dries into large scales. The patient exhales from every part of the surface a deadly, sickening odour, and is soon attacked by œdema, diarrhœa, serous effusions, or chronic enteritis, and often dies. In rare cases several bullæ run partially together so as to detach the epidermis over a large extent, and when the fluid is discharged from them, present the appearance of a part denuded by a blister.—*Gazette des Hôpitaux*, Oct. 1850.—B.]

The disease is sometimes confined to a certain point. We have seen in Biett's ward a man, thirty years of age, who had been from his infancy affected with pemphigus, sometimes in one part, sometimes in another, which produced a purple-red colour on the lower part of the limbs, not unlike that which appears in individuals affected with indolent ulcerations of those parts. It was continually developed in this situation for several years, and the bullæ varied from the size of a small almond to that of a large nut. They sometimes attained the size of the palm of the hand, when the epidermis peeled off, and exposed a large unhealthy looking excoriated surface, which seemed difficult to heal, or they would heal in a day or two, new bullæ form, and pursue the same course as the former.

In some severe cases the patient is confined to bed, but there is rarely any fever. Pemphigus may co-exist with many different eruptions, and most frequently with herpes and prurigo. In the latter (*Pompholix prurigenosus* of Willan) the patient experiences severe itching. Chronic pemphigus may be complicated with various chronic diseases of the viscera. It is evident from the foregoing history, that the duration of pemphigus is by no means determinate. It varies from one, two, or three weeks, to as many months and years, or it may be prolonged to an indefinite period. It often appears in summer and disappears towards the end of autumn. Pemphigus usually terminates favourably; but it sometimes proves fatal, which is generally the result of some severe complication. It often, for example, supervenes on general or local dropsy, or on chronic inflammation of the digestive organs.

Autopsy.—We have had many opportunities of making post mortem examinations, at the Hospital of St. Louis, of persons who

died with this affection, and have never met with those blebs or bullæ which have been alleged to exist on the mucous membranes, and particularly on that of the pharynx. We have generally, on the contrary, found these membranes pale, and an effusion of serum in the chest. We have also frequently observed the fatty liver in those cases; and Biett has likewise met with this lesion co-existing with pemphigus.

Causes.—Pemphigus may attack persons of all ages, but especially adults and old people; both sexes are liable to it, but males much more than females. Some persons are attacked frequently during life at different intervals. In other cases chronic pemphigus may be prolonged by successive eruptions for an indefinite period. In some instances it appears to be endemic, or, at least, it attacks a number of individuals at the same time. Acute pemphigus frequently appears during the summer, in persons who have been exposed to the sun's rays for some time. Dentition, change of food, and excess, appear to promote the disease. This variety attacks young persons only. Chronic pemphigus affects old people, and particularly persons of a broken-down constitution. Poor and scanty food, over-exertion, low and damp dwellings, evidently predispose to the disease. It has been observed to follow an attack of rheumatism or inflammation of the bowels. Cold and moisture, especially when connected with immersion for some time in water, are active causes of acute pemphigus. The chronic form occurs more frequently in women than in men—the reverse of that which obtains in acute pemphigus. Mental emotion, disorder of the uterine functions, especially suppression of the catamenial discharge, and hæmorrhages of various kinds, are also causes of this variety of pemphigus.

Diagnosis.—The presence of isolated bullæ, and the thin laminated crusts which cover the whole or part of the diseased surface, will always prevent pemphigus from being confounded with other cutaneous affections. It is distinguishable from *rupia simplex* on account of the bullæ of the latter being exceedingly few, and terminating in ulcerations, and in thick prominent scabs. In *ecthyma* the epidermis is sometimes raised to a certain extent by a collection of pus, and thus forms a kind of bulla; but in this case the fluid is purulent and not serous; the apex of the cuticular eleva-

tion is brownish; and, besides, pustules of ecthyma at an earlier stage will be found on some other part of the body. In *herpes* the vesicles are always collected in groups upon a red and inflamed surface, whilst the bullæ of pemphigus are isolated, and are generally free from surrounding inflammation. However, in some rare instances the bullæ of acute pemphigus are small and agglomerated here and there, and the disease has a considerable resemblance to clusters of herpes phlyctenodes; but then, on the other hand, isolated bullæ, with their distinctive characters, are always discernible; and, besides, these groups are formed by an agglomeration of bullæ, which, although small, are always more voluminous than the vesicles which constitute those of herpes.

Those bullæ which appear during the progress of erysipelas are merely accidental, and the actual presence of that disease will distinguish them from those of pemphigus. In some cases the incrustations of pemphigus may be mistaken for those of impetigo, but if they form a sort of general envelope, as before observed, they can scarcely be mistaken; for impetigo is usually confined to a limited surface, and rarely ever extends over the whole body. Besides, the crusts of the pustular diseases are red, thick, and indented; whilst the others are thin, frequently incurvated at the centre, and sometimes wrinkled. In general they assume the form and size of the bullæ to which they succeed. The red patches remaining after pemphigus present certain peculiarities which are easily perceived by persons accustomed to see this eruption. They are of a dark red colour, separated from each other, of an irregular form, of variable size, and occasionally giving rise to slight cuticular exfoliation.

Prognosis.—The prognosis of acute pemphigus, if unattended with any serious complication, is always favourable. That of chronic pemphigus varies according to the constitution of the patient; it is less favourable in proportion as the eruption is more extended and frequently developed, and the patient enfeebled by age, by poverty, or by dissipation. It may be stated, generally, that pemphigus is always indicative of a bad state of constitution. Its severity usually corresponds with that of the chronic diseases with which it co-exists. It has been alleged that pemphigus sometimes appears as a favourable crisis in the course of some dangerous

diseases, as pneumonia, and typhus fever. We are at a loss to know upon what facts this opinion is founded.

Treatment.—Acute pemphigus is a mild disease, and requires but simple treatment. However, if inflammatory symptoms should appear, and if the eruption is diffused, the warm bath, bleeding, or leeches to the anus, may be employed with advantage. In chronic pemphigus the treatment should also be antiphlogistic at the commencement, but care should be taken not to push it too far; acidulated drinks, and mild tonics, are the most appropriate remedial measures at this period. At the same time, if there be much pain, emollient applications and opiates ought to be employed, especially if there is much insomnolency, diarrhœa, or dull pain in the abdomen.

If an obstinate cough, bloody sputa, and other severe symptoms supervene, bleeding must be had recourse to. But it is necessary to bear in mind that chronic pemphigus is not a purely inflammatory affection, and if, notwithstanding the administration of the remedies already indicated, the eruption should continue to reappear, the strength of the patient must be recruited with tonics, nourishing food, &c. The decoction of bark, with half a drachm of sulphuric acid to the pint, or the preparations of iron, especially the citrate of quinine and iron in an infusion of hops, will be found very efficacious. These remedies are often required in young subjects as well as in the old, where they will be found equally efficacious. They should be regulated according to the constitution and condition of the patient.

[In chronic pemphigus, bleeding should never be had recourse to; it may occasion fatal results. Indeed, in any form of this disease its employment is questionable. This eruption is the outward expression of depressed vital force, and the strength should be husbanded all through. Such is my experience here, although I have seen cases at the Hospital of St. Louis brought to a successful termination, in which phlebotomy had been freely used. Tonics, and even stimulants, are frequently required. The application of caustic to the ruptured bullæ is not attended with the good results alleged. The practice should rather be to preserve them from breaking as long as possible, and when they do open, one of the

glycerine lotions, given in the Formulary, will be found the most suitable topical application.—B.]

RUPIA.

Syn.—*Ulcus atonicum.*

Rupia (from ῥύπος—sordes) is characterised by flattened bullæ, of variable size, filled with a fluid frequently serous, frequently purulent, sometimes blackish, which are succeeded by thick scabs and ulcerations of more or less extent. This affection has a great analogy to ecthyma, of which in many cases it appears to be a variety, as indicated by Bateman and Biett. The lower extremities are more frequently affected than any other parts. It may, however, appear on the loins, the buttocks, the upper extremities, and elsewhere. Rupia generally produces but few bullæ, which are widely separated from each other. It pursues a chronic course, and its duration varies from a fortnight to several months. There are three varieties of rupia described by writers, which differ from each other, however, more in degree than in kind.

1. *Rupia simplex.*—This form chiefly attacks persons who are ill-fed, ill-clothed, and who have suffered from privation of every kind. It often appears amongst the sequelæ of small-pox, measles, and scarlatina. It appears in the form of bullæ, about the size of a shilling, round, flattened, and developed, without any previous inflammation. These bullæ contain at first a serous fluid, which subsequently becomes opaque and purulent. They soon shrink, the fluid concretes, and forms reddish brown crusts, thicker at the centre than at the circumference, where they are attached to the epidermis, which is slightly elevated at that point. A slight ulceration of the skin exists beneath the scabs. These fall off in a few days, and cicatrisation speedily ensues; but in some cases circular-shaped ulcers are established, which continue for several days, and are incessantly renewed. A livid red colour remains after cicatrisation has been completed. Rupia simplex frequently accompanies those cases of ecthyma where there is considerable suppuration, and in which the epidermis is raised to a certain extent by thin liquid pus, forming genuine bullæ. The largest of these are soon covered with a thick crust, raised at the centre, and

depressed at the edges, which are continuous with the raised epidermis.

2. *Rupia prominens.*—The second variety differs from rupia simplex by the larger size of the bullæ, the greater extent of the ulceration, and the thickness of the crusts. It has a close resemblance to that form of chronic ecthyma described by Willan under the name of *Ecthyma cachecticum*, and most frequently attacks individuals of a broken-down constitution. Its usual seat is the lower extremities. It often occupies but a single spot, in other cases several patches; but the bullæ are always isolated and distinct. This variety commences with a circumscribed inflammation of the skin, on which the bullæ are subsequently developed. The latter sometimes form rapidly, and are filled with a serous fluid; but, in general, the epidermis rises gradually, not with a citron-coloured serum, but with a thick blackish fluid. In some instances resolution may occur, and the inflammation disappear, without the formation of scabs. In general the serous fluid concretes speedily, and forms rough, dark-coloured scabs, the thickness and extent of which, although at first considerable, goes on gradually increasing. The circumference of this scab is surrounded by an inflammatory areola, some lines broad, upon which the epidermis is again raised; a new incrustation is formed, and adds to the extent of the former, at the same time raising that concretion above it. The red areola is again developed slowly round the circumference, the epidermis rises, and by these successive additions the primitive scab becomes greatly enlarged and thickened; and finally it ceases to extend after a certain period, varying from two days to a week. The scab is now broad and conical, and the superadded layers may be seen distinctly round the circumference. It is of a reddish-brown colour, and is not unlike in appearance to a small oyster-shell. In other cases it is conical, and resembles the shells of certain mollusca which adhere to rocks. This scab continues sometimes for a long time, and if it be easily detached in some cases, it is with much difficulty in others. The exposed surface is more or less ulcerated, according to the duration of the scab. Sometimes a new scab quickly forms; at other times, a round, unhealthy-looking ulceration of considerable depth is established, which it is very difficult to heal, especially in old sub-

jects. Its edges are of a livid red colour, and tumefied; the surface is pale, and bleeds on the slightest pressure, and its circumference is sometimes larger than that of a crown-piece. After a certain period, cicatrisation takes place, and a purple patch remains, which slowly disappears.

3. *Rupia escharotica.*—The third variety appears to be the same affection as that described by other writers under the name of pemphigus gangrenosus. This variety only affects infants, from the period of birth up to that of the first dentition. A cachectic state of body, resulting from bad nourishment, exposure to cold, or some anterior disease, seems to be the exciting cause. The loins, the lower extremities, the neck, the upper part of the chest, the abdomen, and the scrotum, are the usual seats of this disease. It commences with slightly prominent livid patches, upon which the epidermis is soon raised here and there by an effusion of serum. These elevations increase, and form large flattened and irregularly-shaped bullæ. The latter are surrounded with a red, or violet-coloured areola. The serum thickens, and assumes a blackish tint. The bullæ soon break, and ulcerated surfaces appear beneath, spreading both in depth and in width. Their edges are red and inflamed, and they are covered with fœtid, unhealthy pus. When these disappear, new bullæ form, and pursue the same course. The infant suffers from acute pain, much fever, and insomnolency. When the disease assumes an intense form, death may ensue in the course of a week or ten days. When it does not terminate fatally, the ulcerations are very long in healing.*

Diagnosis.—Pemphigus and ecthyma are the diseases most frequently confounded with rupia. The latter, however, differs from pemphigus in this respect, that the bullæ rarely contain a transparent serous fluid, but rather a sanious liquid; and besides, the form of the scab, which is thick, rough, surrounded from the beginning with an inflammatory areola, on which the epidermis is raised, and its oyster-shell appearance, together with the consecutive ulcerations of rupia, are sufficient to distinguish it from pemphigus. Ecthyma, as we have observed, has a considerable

[* Rupia is often met with amongst the lower animals. It attacks the horse about the fetlock, and is a very troublesome disease.—B.]

resemblance to rupia; they are frequently seen existing close by each other in the same individual. The first variety of rupia does not resemble ecthyma so much as the others. The resemblance only exists when the cuticle is raised by a quantity of pus into the form of a true bulla. We have, for instance, frequently seen at the Hospital of St. Louis an ecthymatous eruption, in which a great number of pustules were set close together, the epidermis was raised in several places to the extent of a shilling, genuine bullæ, filled with purulent fluid, were developed, which terminated in the characteristic scabs of rupia. These scabs, however, only formed on the largest of the accidental bullæ. In admitting the great analogy that exists between these two diseases, it is necessary to observe, that the peculiar character of the scab, and the deep and rebellious ulcerations of rupia, establish a distinction between them, frequently very well marked, and sufficient to admit a separate description of each, which are otherwise produced by the same causes.

Prognosis.—If we except rupia escharotica, rupia is not a severe disease. The age of the patient, the state of his health, and the extent of the ulcerations, will be our guides in forming an opinion as to the duration of the eruption.

Treatment.—The treatment of rupia ordinarily consists in restoring the health of the patient, which is generally debilitated, by good nourishing food; tepid and alkaline baths, when the ulcers are cicatrizing slowly; or, still better in those instances, emollient applications, or lotions of wine with honey or aromatics; or, finally, slight cauterizations with the nitrate of silver. This treatment will not be sufficient in the large round ulcerations which succeed *Rupia prominens.* Although the emollients will appease the pain, they will not reduce the surrounding inflammation, nor hasten the cicatrization. Adhesive bandages, so useful in rebellious ulcers, are needed here. It will then be necessary to modify the condition of the diseased surface, and caustics will produce this result better than any other remedies. It will sometimes be necessary to cauterize the ulcerated surface deeply with the nitrate of silver, or, still better, to wash it with nitric or hydrochloric acid, diluted with water. And in cases where these remedies will not produce cicatrization, the parts should be cauterized with the concentrated

acids, or with the acid nitrate of mercury. An ointment of the proto-iodide, or the bin-iodide of mercury, is often very efficacious. In all cases, repose, and the horizontal position when the disease is seated on the legs, are indispensably necessary. In rupia escharotica it is necessary to continue the emollients at least as long as the fever continues. Quinine mixtures, wine, &c., so frequently administered in these cases, do not appear to be very efficacious. It is therefore from amongst the anodyne and emollient remedies that we should select the external applications.

[Rupia, like pemphigus, is a disease of depression, and frequently occurs in persons of debilitated or broken-down constitution. The chief indications in the treatment are to endeavour to restore the vital functions to a healthy condition by a course of tonics and alteratives, generous diet, pure air, and occasional warm baths. Sarsaparilla is a favourite constitutional remedy in both the above-named diseases; but from what I have myself observed, I should not be inclined to place much faith in this time-honoured remedy, as an efficacious agent in the treatment of rupia, or indeed of any other disease characterised by depression. Many of the virtues attributed to it seem to me to be purely imaginary. As a local application, the solid nitrate of silver will be found the most useful.—B.]

[BUTTON SCURVY.

Ecphyma Globulus.

[A SINGULAR variety of cutaneous disease, possessing some of the external characters of rupia, is prevalent in the midland and southern counties of Ireland, and has not been observed, so far as I am aware, in any other country. It is popularly called "Button *Scurvy*;" but this is a misnomer; for it has no relation whatever with *scurvy*—a term that is applied by the lower orders in Ireland to all those forms of cutaneous disease which they imagine arise from a vitiated state of the blood. This disease is characterized by an eruption of one or more scattered excrescences, on different parts of the body, each of which in form resembles a convex button —hence its name—and varies in size, from four or five tenths of an inch, to an inch and a quarter in diameter. It is highly contagious, and is described by some writers, erroneously, as confined to the cuticle. It is not a syphilitic disease; although sometimes bearing a resemblance to the syphilitic condylomata described by Fricke.

Dr. Patterson, of Dublin, read an interesting paper on this disease before the Surgical Society of Ireland, in which he states, from personal experience, that it is perfectly distinct from rupia, and in his opinion, is a disease *sui generis*. He observes:— "Button scurvy has neither a vesicular nor a pustular origin. The excrescence is not a scab, neither can it be rubbed off; but consists of a regularly organized parenchymatous structure. When a patient affected with the disease presents himself, and is asked to show a part where it is beginning to appear, he invariably exhibits a spot, where the skin, to the extent of a fourpenny or a sixpenny piece, presents a bright red colour, and is slightly elevated; the elevated portion having its surface equally raised at the centre and at the margin, without the least tendency to suppuration, or the formation of a vesicle. If the progress of the disease be watched

from time to time, the part may be observed to become more and more protuberant, until it at length forms an excrescence in high relief. The circumference of the excrescence appears to observe a proportional increase; but as the elevation of the central parts has greatly the advance of that of each succeeding marginal ring of increase, the tumour, in attaining its full size, acquires considerable convexity.

In the first stage—that is, while the morbid structure is little elevated above the surrounding healthy skin, the surface of the diseased cuticle is dry, free from exudation, and minutely tuberous. The tuberous appearance seems to be caused by an aggregate eruption of papulæ. In what may be termed the second or middle stage, the surface of the excrescence, now become more prominent, is still dry; but it is smooth, as if from distension of the cuticle now raised from the cutis, and is much paler than in the first stage. In the third stage, when the excrescence has attained a certain standing, rather than great bulk, its appearance has become much altered, its surface is covered with a strongly adherent crust of rough, greyish-brown, concreted, glutinous exudations of variable thickness. If this crust is removed, the true surface of the excrescence appears smooth and unbroken, except that one or more shallow fissures may be observed running across the convexity, and frequently a similar fissure running round the base of the tumour where it adjoins the healthy skin. These fissures pour out a considerable quantity of thin watery humour. The patient complains of much soreness in every stage; but in the third the excrescence, when rubbed or pressed, is painful in a high degree. It is the painfulness of this stage that drives him to seek for medical aid.

The excrescence possesses in every stage a fleshy, elastic firmness, and has its base not imbedded in the cutis, but entirely superficial, as if simply laid on the surface of the part; hence, it may be removed without occasioning either ulceration or abrasion of the true skin. Of the latter tissue there is no induration nor other complication, but an increased vascularity of the part strictly subjacent to the tumour. The increased vascularity of the cutis is analogous to what is observed in other tissues where an adventitious organized body is attached and derives nutrition, as in the case of the uterus

and placenta. Button scurvy must then be regarded as entirely a disease of the cuticle.

The pathology of button scurvy may, perhaps, be conveniently explained by the application of the doctrine of the cellular development of the tissues. It may be conceived that in the part that has become the seat of the disease, the epidermoid cells, instead of normally suffering a deprivation of their original powers of absorption and nutrition, and undergoing desiccation and death, as each layer is successively formed, assume a higher grade of organization, and retain indefinitely their vitality and powers of nutrition and reproduction. This view is supported by the circumstance, that the excrescence appears to increase as well by its own interstitial growth as by the accretion of new substance to its base.

The excrescence does not appear to be permeated by vessels, but to be nourished by the imbibition and intercellular transmission of fluid, as is observed in cartilaginous and other simple cellular tissue.

If this account of the development and organization of button scurvy be correct, it is evident there can be no degree of relationship between that disease and rupia.

The syphilitic semi-globular condylomata, described by Fricke, approach the nearest to button scurvy of all other described forms of cutaneous disease. Yet these condylomata and button scurvy cannot be mistaken for each other; they differ in colour and locality; and if those of Fricke be the same as certain condylomata occurring about the anus and organs of generation that are to be met with in this country, they differ in this, that the latter have their bases imbedded to some depth in the skin; whereas the excrescence of button scurvy is entirely superficial. But above all, there is this important distinction, that the semi-globular condylomata "become converted by neglect into condylomatous chancres"—a conversion not observed in button scurvy.

Mr. Carmichael, who wrote on this subject, did not regard button scurvy as a venereal affection. He says, "the spots may be distinguished from venereal by not exhibiting at any period the deep red or copper colour which characterises the latter during their scaly or declining stage."

Button scurvy is emphatically a secret disease. There is no

other cutaneous disease the sufferer takes so much pains to conceal. The reason is obvious. While in scaly and other skin affections the common people are unable to distinguish between the contagious and non-contagious, the singularity of the appearance of button scurvy enables them at once to recognise it; and there being no doubt entertained of its contagious nature, the unhappy patient becomes shunned by all, and if he has no dwelling of his own, excluded from every bed.

It is highly contagious. The medium of infection, no doubt, is the fluid secreted by the excrescence; and if it be admitted that the latter is produced by the abnormal reproductive action of the epidermoid cells, the phenomena afford an interesting instance of an appropriate stimulus developing the reproductive function in inactive organisms. There is no other way of conceiving how the secretion of an organized body being applied to the healthy skin will there cause the growth of similarly organized bodies, except it be supposed that the secretion contains the germs of the cells of an adventitious tissue; but then, as such germs would only require nutrition, their development would occur on whatever part of the skin they should be fixed; whereas the excrescences of button scurvy are restricted to a few isolated spots of the surface, as if it were only there the epidermoid cells were susceptible of the reproductive excitement.

As to the question, whether is the disease a constitutional or a merely local affection, the treatment most generally adopted by medical men shows that they for the most part regard it as the former, yet for what reason it is difficult to understand. Most certainly, it is not necessarily attended with constitutional symptoms, for in many cases the general health is in the best possible state, and the effects of remedies are very far from countenancing such an opinion. On the contrary, the disease is so intractable under the prevalent constitutional treatment, while, at the same time, the patient is ever evincing such an anxious desire to get rid of it, that it constitutes one of the most annoying cases the practitioner meets with.

It is scarcely necessary to remark, that "button scurvy" is a misnomer; for the disease has no alliance whatever with scurvy. But it is so named in popular language, because, amongst the lower orders of the people of Ireland, "scurvy" is a general term applied

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to all those forms of cutaneous disease which they imagine to arise from a vitiated state of the blood. In nosology, the place for the disease would be in the *ecphyma* of Good, or *condyloma* of Sauvages. But there is no genus in Cullen or Willan's classification into which it could be introduced. If *globulus* (a button) be received as a specific term characteristic of the form of the excrescence, then *ecphyma globulus* would compose the expression of the genus and species to which the disease may be referred.

Mr. Carmichael, of Dublin, considers this an original disease, in no way connected with rupia, frambœsia, pian, the sivvins of Scotland, or the yaws of Africa, which it was supposed to resemble. Dr. Jacob regards this affection as a disease of the true skin, and not of the cuticle. The redness which characterizes the early stages, and the pain experienced in the latter stages on this morbid part becoming exposed, showed that its original seat and subsequent growth were in the vascular tissue of the cutis vera. It is obvious from the preceding history of the disease that it resembles in structure vascular growths from the true skin. Button scurvy is regarded by some writers as a purely local complaint, from the circumstance of its often being removed by local applications alone. Dr. Patterson says: "Of all cutaneous diseases, there is not one that can be cured with greater facility than button scurvy. When a patient affected with the disease applies for relief, the practitioner has only to rub the surface of each globulus well with a cylinder of nitrate of silver, and desire the patient to return in two or three days. He will then observe the globuli considerably reduced in protuberance, and having again freely applied the nitrate, he will, at the patient's next visit, find them entirely removed."

It is rarely necessary to apply the nitrate of silver oftener than twice; and when the globuli are removed in this way they do not grow out again, nor do fresh ones appear on other parts of the body, provided the patient is not exposed anew to infection. It would appear that the nitrate of silver acts simply as a poison, destroying the morbid vitality and reproductive powers of the epidermoid cells, which, returning to their normal state, contract, become flattened, dry up, and are cast off. Professor Porter, of Dublin, however, considers it a constitutional as well as a local disease, and has seen cases that would not bear the application of caustic. He recom-

mends the bichloride of mercury in small doses, until it affects the mouth; but does not consider the complaint a syphilitic one.

Dr. Battersby observed several cases of button scurvy at Steevens's Hospital, Dublin, under the care of Mr. Cusack. The following is a summary of his opinions as to the nature and progress of this disease, as expressed in some MS. notes of his, placed at my disposal by Mr. Acton. The disease consists of certain distinct and scattered fungoid excrescences from the *true skin*, generally encrusted, and firm and resisting to the touch. They are of a rounded or oval figure, and vary in size from that of the section of a split pea to that of a walnut, being sometimes, though rarely, larger. Each tubercle is considerably raised above the surface, with a convex aspect, not unlike the old coat button, whence it derives its popular name.* These tubercles commence by an itchiness of the skin, which is followed by a circumscribed discoloration resembling a flea-bite, and this again is succeeded, in the course of two or three days, by a small *papula*, the cuticle of which is soon elevated by an effusion of turbid serum, which is quickly converted into a light yellow scab. This is generally rubbed off to give place to others. These incrustations, if allowed to remain, attain the size of half an inch or more, especially when developed on the forehead, and become dark or brownish coloured. They are never *conical* like the tuberosities of rupia, but always irregular and rough on the surface. When the incrustation is removed, the exposed surface very much resembles that of a raspberry or strawberry, owing to the small granulations visible upon it, which are so characteristic that the people describe it as being "seedy." Each prominence is surrounded by a narrow purple coloured areola, not more than a line or two in breadth. Button scurvy is communicated by contact only. It is a disease of the poor. Dr. Battersby failed to transmit the disease by inoculation. He says constitutional treatment is not necessary to effect a cure, although, combined with local remedies, as nitrate of silver, chloride of zinc, &c., it will hasten that event. The drawing which

[* There is a variety of farcy called "Button farcy," which is diffused over the body in the form of small convex tumours, having their origin in the *cutis vera*, which bears some resemblance, externally, to this disease.—B.]

accompanied these statements was not sufficiently clear to show the disease.

Dr. J. V. Browne, physician to the Union Hospital at Galway, has had extensive experience amongst the class of persons liable to button scurvy. He has seen many cases of the complaint known by that name in the country parts of Ireland, and believes that it is not a distinct disease, but a variety of rupia or of chronic impetigo. He says, in a letter addressed to me:—I find that they call two skin affections, which are common here, by the name of button scurvy. One is chronic impetigo, in scrofulous patients who are ill-fed, ill-clothed, and dirty, especially amongst those who live on the sea coast. The other is rupia, which is very common amongst the poorer class of tradespeople and mechanics. In the latter I have almost always found syphilitic taint.

Mr. Hamilton, of Dublin, informs me that button scurvy is now a rare disease in Ireland. It was considered by the older surgeons, Dease, Richards, and their cotemporaries, to be a form of syphilis, communicated by contact, by people sleeping in numbers together. Sir Philip Crampton says that formerly it was a common disease, but is not so now; and that it is certainly contagious. The remedy he found most successful, was the oxymuriate of mercury in small doses, and the local application of the tar and citrine ointment.—B.]

PUSTULÆ.

Pustular Eruptions.

The diseases ranged under this order are characterized by small circumscribed cuticular elevations, formed by the effusion of a purulent fluid between the cuticle and cutis vera. These small tumours are called *pustules*. The cutaneous diseases which are characterized by a pustular eruption are variola, vaccinia, ecthyma, impetigo, acne, sycosis, porrigo, and glanders. Some of these affections, as variola, and sometimes ecthyma, appear at the same time over the whole cutaneous surface; whilst others, as vaccinia and impetigo, are partial; and others again, as acne, sycosis, and porrigo, are confined to certain defined limits; and even vaccinia, which only appears where the contagious virus had been actually applied: but no part of the body is exempt from an eruption of pustules.

The progress of these diseases may be acute or chronic, but each pustule terminates individually in from two days to a week. The essentially acute pustular affections are variola and vaccinia. Ecthyma is most frequently acute, but it may sometimes become chronic. The duration of these diseases is from one to three weeks. The chronic pustular affections are porrigo, sycosis, impetigo, and acne. Their duration is uncertain, and they are often prolonged for an indefinite period. Most of them, however, especially impetigo, may assume an acute form.

The pustules of these diseases present some peculiarities which are worthy attention. They are generally *phlyzaceous* in the essentially acute affections, and *psydraceous* in the chronic varieties. The larger, or phlyzaceous pustules, have an inflamed base, as their name indicates. The absence of surrounding inflammation characterizes the psydraceous pustules, which are also smaller than the former. Porrigo, as we shall presently see, is characterized by distinct pustules, called *favi*, and finally another order of pustules, the *achores*,

characterize two eruptions of the head and face, which have been described as varieties of porrigo. The pustules are almost always of an umbilicated form in variola and vaccinia, and even frequently in ecthyma. A small cicatrix, more or less distinct, usually remains after variola and vaccinia. In those varieties which pursue an indefinite course, the pustules are often scattered irregularly over a surface of variable extent; sometimes they are united in clusters, with determinate characters.

The scabs which succeed the pustules have certain peculiarities, according to the nature of the disease, which require considerable attention. In porrigo, they are yellow, circular, and have a depression in the centre, which remains for a considerable time. After once disappearing, they are not reproduced, unless by the formation of new favous pustules. In impetigo, the scabs, which are generally thick and rough, are produced by the concretion of the sero-purulent fluid which is effused over the inflamed surface. They are of a yellowish green or brown colour, and are often replaced by others, developed in the same way. The scabs which succeed the pustules of sycosis and acne are less characteristic, and do not continue so long. In these cases there is often a certain degree of chronic inflammation where the pustules appear, which produces those hard indurations commonly called *tubercles*.

The chronic pustular eruptions rarely leave cicatrices behind; but the skin generally remains red for some time after their disappearance. These diseases may be complicated with each other, each pursuing its own peculiar course. This remark applies also to variola and vaccinia, although it has been argued that these affections never co-exist in the same individual. The pustular diseases are also often complicated with exanthematous and vesicular affections. Variola is often accompanied with severe inflammation of some of the internal organs, which rarely occurs in any of the other varieties.

Causes.—Variola, vaccinia, and equinia or glanders, are only produced by contagion. Porrigo favosa, and porrigo scutulata, although they may appear spontaneously, are generally propagated by contagion. The other pustular diseases depend chiefly on some unknown internal cause.

Diagnosis.—The presence of small cuticular elevations filled with

pus, is sufficient to distinguish the pustular affections from all other cutaneous diseases. The vesiculæ, it is true, contain at a certain period of their formation a thick sero-purulent fluid; but it is altogether consecutive of the transparent serous fluid, whilst the pustular eruptions contain true pus from the beginning; besides, the physical character of this fluid, which is thick and yellow, will readily distinguish it from the opaque-coloured serum which the vesicles contain just before their disappearance. There are, no doubt, cases in which their distinctive characters are not so well marked, as for example in vaccinia, where a pustule succeeds a perfect vesicle; but in general the distinction is easily established. The coppery colour of syphilitic pustules, together with other peculiarities, are sufficient to distinguish true pustular eruptions from those resulting from syphilis.

Prognosis.—With the exception of variola, the pustular diseases, although very troublesome, never terminate fatally. The prognosis is not so favourable when the disease has existed for a long time, and has resisted a variety of curative remedies.

Treatment.—In the acute varieties, the treatment should be decidedly antiphlogistic; but it is difficult to lay down in a general manner that which should be adopted when these eruptions assume a chronic form. Sometimes very simple measures will suffice, but in general recourse must be had to more energetic remedies, with the view of modifying or altering the condition of the skin.

VARIOLA.

SYN.—Small-pox.

Variola is a contagious inflammatory disease, characterized by an eruption of tolerably large phlyzaceous pustules, frequently umbilicated, and always ushered in by considerable constitutional disturbance. According as the disease is communicated by infection or by inoculation, it is called *natural* or *inoculated*. It is distinguished into two species, the *distinct* and *confluent*, implying that in the former the pustules are perfectly distinct from each other, and that in the latter they coalesce. It is also described as *coherent*, when the pustules touch at their edges instead of running together; but these last divisions are very arbitrary, for the eruption is often con-

fluent on one part, as the face, while it is distinct in others. There is likewise a variety of intermediate shades between the mildest form of distinct small-pox and the most severe form of the confluent. It may again be divided into *primary* and *secondary*—the latter being always much milder than the former.

Symptoms.—1. *Variola discreta.* The course or progress of small-pox has been divided into five periods—incubation, invasion, eruption, suppuration, and desiccation. The period of *incubation* extends from the date of the exposure to, and reception of, the contagion, to that at which the morbid symptoms begin to appear, and lasts from six to twenty days.* It cannot be detected by any visible sign, for the health remains apparently good during the time; but in general the disease is severe in proportion as the period of incubation is short. The *invasion* of the distinct form of the disease usually commences with general constitutional disturbance, rigors, depression, lassitude, pains in the back and limbs, hot skin, quick pulse, headache, thirst, nausea, and often vomiting, pain in the epigastrium, and constipation. These symptoms continue for three or four days, and are then accompanied with cough, a tendency to perspiration and sleep, in adults; and in children, drowsiness, and sometimes coma and convulsions. The tongue is intensely red, and the pulse greatly accelerated. In the confluent form, these symptoms are still more severe. The lips and tongue are dry, and covered with black sordes, and there is great prostration.

The *eruption* appears about the third or fourth day, first, on the face; on the hands in some rare cases. It then spreads to the neck, arms, and the rest of the body, in the course of twenty-four hours. Sometimes it is preceded by an erythematous or roseolous rash, and manifests itself by small red spots not unlike small papulæ. During the period of eruption, the skin is hot and shining, there is a general exacerbation of the symptoms at the commencement of this process, and they generally subside when it is completed. A period of four or five days intervenes between the process of eruption and that of suppuration, during which the small red spots increase in volume, and present a peculiar cupped or umbilicated depression in the

[* The period of incubation is stated by Dr. Gregory to be twelve days of apyrexia, and two of fever—fourteen in all. But circumstances may vary this.—B.]

centre. On examining the skin, about the second day of the eruption, a multitude of small cuticular pointed elevations may be seen, with red and inflamed bases, more of a vesicular than of a papular character, although nothing flows from them when punctured. They are, in point of fact, the result of an effusion of semi-transparent coagulable lymph, that subsequently concretes and forms a circular disc, which is attached to the cutis vera. At this period most of these elevations are acuminated, but some are already depressed in the centre. After the third day the central depression becomes more and more marked, up to the period of suppuration. At this stage the pustules are of a whitish colour, and are surrounded with a light red areola. The pulse is now full and regular; very often there are several pustules on the surface of the tongue, and sometimes in the pharynx; there is also some difficulty in swallowing, and slight cough. When the disease is distinct elsewhere, it may be confluent on the face, in the event of which the latter becomes red and swollen as if from erysipelas; the central depression is rarely seen; at the same time whitish pustules with central depression cover the limbs; but they are usually less confluent on the body; the tongue is covered with pustules, which often extend to the pharynx. The eyelids also become the seat of the eruption, and a painful acute form of ophthalmia, often ending in the destruction of vision, supervenes. Coryza and cough in many cases indicate a similar eruption in the nasal passages and in the trachea.

Suppuration begins between the fourth and seventh days after the appearance of the eruption, and terminates in three or four days. It is accompanied with a renewal of the febrile symptoms, and with a general swelling of the integuments, more marked about the face and hands than elsewhere. As the secretion of pus increases, the pustules lose their umbilicated appearance, assume a spherical shape, and acquire a yellow, and in some instances a blackish colour. Suppuration generally commences on the face first, reaching the hands and feet last, where the thickness of the cuticle offers more resistance. A small-pox pustule opened at the period of maturity contains a small quantity of yellow pus, and at the base may be perceived a whitish umbilicated disc, presenting a perfect resemblance to the appearance of the pustule previously to the commencement of suppuration. The pustules do not remain long in a

state of suppuration. They burst in the course of a day or two, and are replaced by dark-coloured crusts or scabs. The process of suppuration is usually accompanied with much fever, tumefaction of the hands and face, ptyalism and diarrhœa. The swelling of the face generally commences about the fifth or sixth day of the eruption, together with the secondary fever. The eyelids, lips, and nose usually swell before the other parts; and in some instances the eyelids are so swollen as to prevent vision for several days. The swelling of the hands occurs at the same time as of the face; and both begin to subside about the eleventh or twelfth day, when the suppuration is terminated. Ptyalism sometimes occurs at the same time as the eruption, but generally not until from three to seven days afterwards. It is sometimes very slight, even when the eruption is free and copious, whilst in other cases it is severe, and an unfavourable symptom. Besides the secondary fever, the general symptoms commonly observed are severe diarrhœa, oppression, difficulty of breathing, and coma, which frequently occur during the period of suppuration.

Desiccation commonly commences at the face, and this region is frequently covered with an uninterrupted incrustation, when the pustules are only forming on the limbs. In *variola discreta* the pustules burst, and the pus escapes and concretes into a small slightly thickened scab, which preserves the form of the pustule. In *variola confluens*, the scabs form on the face about the eighth or ninth day of the disease; the features are masked by a thick brownish incrustation, which falls off from the fifth to the fifteenth day from the date of its formation, and is replaced by furfuraceous scaly crusts, which are frequently renewed. During this period the patient emits a peculiar faint and disagreeable odour, and the linen is soiled by the exudation of pus from various parts of the body. There is a considerable degree of itching present, which induces the patient to scratch himself, until deep and painful excoriations sometimes supervene. When the scabs are completely detached, deep red stains are visible beneath, which disappear slowly, and according as this red colour diminishes, the cicatrices, or pits, become more and more apparent, and usually continue for the remainder of life. Such is the ordinary course of variola. The progress of this disease is, however, subject to some slight irregula-

ritics, and as a general rule it commences and terminates on the face earlier than on any other part of the body. Variola sometimes presents peculiar characters, different to all the preceding, as, for example, may be seen in the variety called *crystalline*, in which there are no pustules; but in their place may be found small phlyctenæ filled with serum. This form of the disease is very dangerous.

Small-pox is greatly modified by being inoculated. When inoculation has been performed, a slight degree of redness is discovered about the third day around the puncture by which the virus was inserted in the skin. A slight circumscribed induration may also be detected in this point on this day, and especially on the following day, by passing the fingers over it. The redness is much deeper on the fifth day, and on the sixth the epidermis appears raised by the effusion of serous fluid under it, and at the same time a depression is visible in the centre. On the seventh the superficial lymphatic vessels in the neighbourhood of the puncture appear inflamed, the movements of the arm become painful, and before the tenth day the usual symptoms of infection are manifested. The initiatory phenomena are nearly the same as those of natural small-pox. Desiccation commences about the twelfth or fifteenth day from the period of inoculation; crusts or scabs form, and fall off about the twentieth or twenty-fifth day, leaving an indelible cicatrix behind. Variola, especially when confluent, may be attended by many serious symptoms. The invasion may be accompanied by violent shiverings, burning heat of skin, with intense headache and gastric pains; with obstinate nausea and vomiting, and severe pains in the limbs, loins, and sides of a nephritic, rheumatic, or pleuritic character. In some cases profound stupor, violent delirium, and even death may occur before the eruption is developed.

The progress of variola may be complicated with a number of diseases, especially with congestion of the different internal organs, or with hæmorrhage; as hæmoptosis, epistaxis, hæmaturia. Congestion of the brain, but particularly of the lungs, is a frequent occurrence; hence we so often meet with bronchitis, pulmonary apoplexy, pneumonia, pleurisy, and œdema of the lungs during the period of the eruption of small-pox. In some cases the congestion

is confined to the skin, which is indicated by the presence of petechiæ. Severe ophthalmia is also very common about this time. Croup is fortunately much less frequent. Death occurs more frequently during the period of *suppuration* than at any other stage of the eruption. The disease advances with frightful rapidity, and dissolution may supervene in the course of a few hours, or even in a few minutes, without any appreciable cause. Death has been attributed in these cases to suffocation produced by the bursting of the pustules into the larynx. Salivation may become very troublesome at this period of the eruption, and may be accompanied by cough, and by considerable difficulty in swallowing. Diarrhœa, unless very severe, is far from being a bad omen at the period of suppuration.

During the period of *desquamation* the complications are of a much milder character. This stage is often complicated with pustules of ecthyma, small subcutaneous phlegmonous tubercles, and with the bullæ of rupia. Amongst the sequelæ of small-pox, we may mention gastro-intestinal inflammation, bronchitis, chronic ophthalmia, deafness, blindness, and even the development of pulmonary tubercles. These complications occur in young and vigorous subjects, as well as in persons broken down by age or dissipation, and the causes which influence their development are by no means clearly understood.

Post-mortem appearances.—The most common pathological lesions observed in subjects dead of small-pox, are various engorgements of the cerebral and thoracic organs, pustules in the mouth, pharynx, œsophagus, and even in the larynx and trachea. The stomach and the intestines, with the exception of the rectum, are rarely affected. It is necessary to be careful not to mistake morbid enlargement of the follicles for variolous pustules of the intestinal mucous membrane; especially as the enlarged follicles, when opened, present a similar depression in the centre, like the pustules of variola. In those cases in which death occurs before suppuration is fully established, variolous pustules may be easily found on the different parts of the mucous membrane before mentioned. We have never observed, amongst the numerous variolous bodies we have had the opportunity of examining after death, pustules

fully distended with pus on the mucous membranes; and it appears to us that the extreme thinness of the epithelium of the larynx and trachea would prevent, by its early rupture, any great accumulation of pus under that membrane, and therefore those instances of sudden death above mentioned could not be owing to this cause.

The internal surface of the stomach frequently presents an injected, dotted appearance. The intestinal mucous membrane is more rarely injected. The heart is generally flaccid and gorged with black blood, as also are the lungs. The aorta is stained, either in patches or continuously, for some distance. The pustules of the skin, which were violet-coloured during life, become pale after death, and on examining their anatomical structure from without inwards, before losing their umbilicated form, the following appearances may be observed: 1. The cuticle preserves its natural consistence, and may easily be raised, leaving beneath a smooth whitish surface with raised edges and depressed centre. 2. A small umbilicated disc, formed by a whitish exudation from the inflamed surface, occupies the place assigned by anatomists to the *corps muqueux*, and seems to be continuous with the subtegumentary tissue, when first developed; at a later period, however, it becomes easily detached. 3. Beneath this disc, the surface will be found red, and frequently moistened with pus; and when examined at a later period of the disease, a thick, yellowish pus will be observed.

Causes.—Variola always appears under the influence of a specific contagion, which may be transmitted mediately as well as immediately, and through the medium of the atmosphere. It spares no age or sex; even the fœtus in utero is not exempt from the infection. It frequently appears epidemically during summer and autumn, but it may occur at all seasons, and in every climate. Some individuals have the power of resisting its influence, even when placed in the most favourable circumstances for catching the disease. In general it does not affect the same individual more than once during life; but there are innumerable instances on record in which it occurred twice, and even thrice, with the same degree of intensity as at first, in the same person. Several curious and well-authenticated cases of this kind will be found in Dr.

J. Thomson's work;* and, among others, that of a lady who, after having had small-pox in her youth, was attacked by the disease six times while nursing her six children, who were inoculated with the virus.

Varioloid.—When small-pox occurs in persons who have been vaccinated or inoculated, it is accompanied with special characters; it is greatly modified, but more so in the former than in the latter instance, and has been described under the name of *varioloid.* We have here another proof that the anti-variolous power of vaccination is greater than that of variola itself.† This variety differs from variola proper by the extreme irregularity and rapidity of its course, by its mild character in most cases, and by its favourable termination. In some instances, however, it assumes a severer form than distinct small-pox. In these cases the pustules, although few in number, pursue the usual course of those of variola, which is not the case with the pustules of varioloid. The same individual may be affected several times with this variety. The period which has elapsed from the act of vaccination, or from a previous attack of small-pox, appears to have no influence on the progress of varioloid. The latter eruption sometimes appears in persons who have been carefully vaccinated only a few weeks previously, with some degree of intensity, or it may present a very mild appearance after the lapse of twenty years. The same

[* *Historical Sketches and Enquiries.* See also Dr. Gregory's work on *The Eruptive Fevers*, which contains numerous instances of this kind.]

[† Variola is a common disease of the lower animals. It does not, says M. Heusinger, *originate* in animals, but is transmitted to them from man; it passes readily from one animal to another, and from animals to man, and *vice versa.* The more severe the disease, the greater is the guarantee against a second attack. When well developed, it has the strongest resemblance to the variola of the human subject; but as in man, it often occurs in a transitory form, with slight febrile symptoms, and without eruption; also in the form of variola varicella; and there is even a species of varioloid which attacks sheep. It is highly contagious, and has been observed in new-born lambs, which had contracted it in the womb. Sheep, dogs, rabbits, and goats are subject to variola. The variola of hogs is well known. It occurs in an epizootic form when the disease prevails as an epidemic in the human race. Heusinger entertains the opinion that the vaccine disease (*vaccinia*) was first produced by the transmission of variola, either immediately or mediately, through other animals to the cow, and that it did not originate in an epizootic form, and without external contact, as alleged by many writers.—B.]

is true with regard to its occurrence after variola. We have seen varioloid in persons who never had small-pox, and who had been vaccinated without success. The virus of a pustule of modified small-pox may produce variola discreta in persons who have not had the disease, or who have not been vaccinated; but the disease is generally very mild. The premonitory symptoms are sometimes very severe; in other instances they are almost altogether absent. The eruption may be preceded by slight erythematous patches, scattered irregularly over the body. Sometimes it is very trifling, or from twenty to a hundred pustules may appear on different parts of the body; or, again, it may cover the whole cutaneous surface. It usually commences on the face, but it is often developed simultaneously in different parts of the body.

A number of small, hard, red, elevated spots first appear, somewhat like red papulæ in appearance. Many of them disappear without undergoing any transformation: others become vesicular or pustular in the course of twenty-four hours. The vesicles are small, acuminated, and filled with a whitish fluid; they are frequently transformed into umbilicated pustules, but in general they burst in two or three days, and are replaced by thin, round, slightly adherent scabs. The vesicles are sometimes surrounded with a red areola, which gives them the appearance of those of vaccinia. The pustules are small, round, and never attain the size of the pustules of variola under any circumstances. They are soft and flaccid, as if their growth had been prematurely arrested. They are sometimes acuminated, sometimes depressed in the centre. The contained fluid is absorbed between the first and fourth day, and either thin, flat, round, brownish incrustations form, and soon fall off; or else hard, brownish, shining scabs, imbedded in the skin, are developed, and continue up to the twentieth day. It is in consequence of the irregular progress of the eruption, or from frequent successive eruptions, that these papular elevations, vesicles, pustules, scales, and scabs, are observed on the same patient at the same time. The scabs are sometimes replaced on the face by warty elevations, which are slow in disappearing. The duration of this mild affection varies from six to twelve days and more. It always terminates favourably, and in some rare cases it leaves a few slight scars behind.

Diagnosis.—The diagnosis of small-pox is not difficult. The presence of the umbilicated pustules, which are generally preceded by fever and general symptoms, together with the peculiar progress of the eruption, are sufficient to distinguish variola, not only from other pustular affections, but from every cutaneous disease. Varicella is more frequently mistaken for small-pox than any other affection. It is the distinct form of variola and the varioloid diseases that are generally confounded with varicella; but these errors are not unfrequently owing to the preconceived views and opinions of the observer. As, for example, those who deny the possibility of a second infection, or that variola can be developed after vaccination or inoculation, will not admit the identity of the disease; and hence they give it the name of varicella. In comparing the progress of the varioloid disease with that of varicella, they are undoubtedly very similar in many points of view. Under the head of varicella we have pointed out fully those characters which perfectly distinguish the one from the other. The diagnosis of the various affections with which variola is complicated is often very difficult. The progress of these diseases is frequently so rapid that death may ensue before the manifestation of a single symptom indicating danger.

Prognosis.—The prognosis of small-pox is not unfavourable when the eruption is mild and its progress regular; but it should be very guarded when the disease is confluent, in consequence of the dangerous complications which commonly occur during the course of that form of variola. It will be unfavourable when the disease occurs in children at the period of dentition; in strong and plethoric adults; in persons debilitated and worn out, either by age, dissipation, or some former complaint; in pregnant women, or in those newly-delivered; and in young females who have a great horror of the anti-cosmetic powers of this fearful malady. When the precursory symptoms disappear suddenly, or continue with violence after the eruption has appeared, danger is to be apprehended. When the eruption is abundant, when it is mingled with petechiæ, and the pustules filled with blood, the prognosis will also be unfavourable. When the eruption does not advance, and when the pustules remain indolent, white, and flattened, it will not be very favourable; but the nature and intensity of the general

symptoms should be carefully taken into account before pronouncing an unfavourable issue. The condition of the cerebral and thoracic organs should never be lost sight of. They require the greatest attention.

Treatment.—When variola pursues a regular course, and is not complicated with any internal disease, rest, a cool temperature, regimen, and diluents, are the only measures required. Emetics are in general unnecessary. If there is constipation present, it can be obviated by simple injections of warm water, &c., or by mild laxatives. The pediluvium, or the application of warm cataplasms to the feet, when there is intense headache; mild, cooling gargles, when the throat is sore and painful; and emollient lotions to the eyelids when the pustules are producing irritation; are the only remedies required in simple small-pox. When the eruption is slow of appearing, and when there is no organic disease present, an emetic or sudorifics, as the acetate of ammonia, may be administered; a warm, and even a vapour bath, may often be employed with advantage.

When variola appears with symptoms of greater severity, and especially at the period of invasion, when there are symptoms of cerebral or gastro-intestinal irritation present, venesection or local bleeding may be resorted to with the greatest advantage. General bleeding has always been advocated until of late years in the treatment of variola, while many now think it may be attended with untoward results. It is too true that it does not always prevent a fatal result, and when repeated several times with the intention of cutting short the eruption, the result has proved unfavourable and often serious. If not employed until congestion has occurred in the vital organs, it may hasten death. Local bleeding should be practised at the anus, epigastrium, neck, temples, or mastoid processes, according to the nature of the symptoms. When there is acute local pain, a number of leeches should be applied without hesitation to the part. General bleeding is always indicated when the patient is strong and vigorous, when the eruption is confluent, and when symptoms of organic disease supervene; but bleeding never should be had recourse to during the period of suppuration, when the patient's strength is exhausted. When the internal congestion advances slowly and insidiously, and the pulse sinks, blisters to the

legs, and purgatives, are often more efficacious than bleeding; but if the latter remedy is decidedly indicated, local bleeding should be employed. As a general rule, when venesection is indicated, it should be performed freely, so as to produce an evident and decided effect on the system. We should always bear in mind that bleeding is far from acting so favourably in the inflammatory complications of small-pox as in simple inflammation of the same organs.

Mild purgatives are frequently of great service at the period of suppuration, in checking the insidious inflammatory and congested state of the brain and lungs, which commonly obtains in the more dangerous forms of variola. It has been proposed, with the view of lessening the deformity which so frequently arises from small-pox, to rub the surface of the body roughly with a coarse towel, as soon as the eruption is completed; and to cauterize the pustules on the face, to prevent cerebral congestion as well as scars. But these advantages are more imaginary than real, as we have often seen this plan of treatment followed by effects the very opposite of what was expected. But when ophthalmia supervenes, the pustules on the eyelids should always be cauterized immediately with the nitrate of silver, either in the form of ointment, in solution, or in the solid form. The best means of preventing cicatrices from forming on the face, consists in opening carefully each pustule, pressing the matter gently out, and by preventing the scabs from remaining long by the application of emollient fomentations. Various plasters have been recently recommended for this purpose, and especially the Vigo plaster, but they do little good in mild cases, and may do harm in severe ones. The application of cold water to the body should never be employed.

Emetics of the acetate of ammonia, together with the use of temporary blisters, sinapisms, and warm baths, are especially serviceable in these cases, when the eruption is arrested by cold during winter, when its progress is slow, and when there is general prostration and sinking of the pulse.

Tonics are often very useful after the period of suppuration, when the patient's strength is exhausted; but these remedies, together with opiates, which are very beneficial in checking the diarrhœa and in producing sleep, should be administered with much caution and watchfulness. Towards the termination of the

disease, warm baths, administered with the necessary precautions, will favour desquamation, and obviate, in a great measure, the tendency which exists to the development of boils, subcutaneous abscesses, pustules of ecthyma, &c. A few mild laxatives are often required after the disease has completely subsided. The various affections with which variola may be complicated require each a separate and appropriate treatment, the details of which would be out of place in a work of this kind.

[A variety of means has been proposed by both ancient and modern writers to prevent pitting, and the consequent disfiguration, but unfortunately with little success. Nitrate of silver, either in solution or in the solid form, is the favourite local application of modern practitioners in this country. In France the preference is given to ointments of various kinds. Mercurial and sulphur ointments, almond oil, tincture of iodine, and collodion have been recommended for this purpose. Mercurial ointment, thickened with starch, and applied freely over the face, has been found useful by M. Briquet. But the usual remedy of the Parisian hospitals is the simple mercurial ointment, with which the patient's face is covered. None of the local applications, however, are invariably successful.—B.]

VACCINIA.

Syn.—Cow-pox; Grease.

Vaccinia is more a vesicular than a pustular disease; but as it is so nearly allied to variola we shall, perhaps, be excused for describing it in this place.

Vaccinia is a contagious eruptive disorder, developed spontaneously in the udder of the cow, and when communicated to man it has the effect of preventing, or at least of modifying, the eruption of small-pox. It is characterised by the appearance of one or more silvery-looking, large, flat, multilocular pustules, depressed in the centre, surrounded with an erythematous areola, producing a brownish scab, which is detached about the twenty-fifth day, and leaves behind a peculiar cicatrix.

Causes.—Dairy-women are often infected, from milking cows

with this eruption on their teats. Genuine vaccinia is sometimes developed on the hands of ostlers who have the care of horses with the *grease;* but the eruption is most commonly produced by vaccination with the virus of the cow, or with that which is produced in the human subject from the original source. The latter is generally preferred, because it induces a milder form of the eruption, and is equally as certain in its action as the former. The vaccine virus possesses its greatest activity about the fourth or fifth day from the appearance of the pustule, or the ninth day from the period of vaccination. The upper third of the arm, over the insertion of the deltoid muscle, is the part usually selected for vaccination—an exceedingly simple operation, which may be performed in the following manner:—The surgeon should take hold of the posterior part of the arm to be operated upon with his left hand, and draw the skin tightly backwards, and with the other hand he should introduce the point of a lancet, charged with the virus, a few lines into the skin in an oblique direction. It should be allowed to remain in that position for a few seconds, and when withdrawn the puncture should be compressed for a moment or so, in order to prevent it from bleeding. To ensure success, several punctures are frequently made at the same time; but a single well-developed vesicle is sufficient to impregnate the system with the infection. Some patients are very insusceptible of the vaccine contagion, and require to be vaccinated several different times before they become infected. Children under six weeks of age should never be vaccinated unless in case of urgent necessity.

Symptoms.—The progress of the eruption of vaccinia is marked by four different periods. 1. The first continues for three to four days from the date of inoculation; but it is sometimes prolonged to the fifteenth, twentieth, and twenty-fifth day, during which the puncture undergoes no further change than that produced by the red areola which surrounds it almost from the beginning. 2. In the second stage, which commences generally about the third or fourth day, and terminates on the eighth or ninth, a small hard red spot is perceived, which is raised and distended on the fifth day by a serous exudation. On the sixth, it becomes a perfectly-formed umbilicated vesicle of a whitish colour, and round or oval form. When the puncture is large, the vesicle gradually increases, and preserves its umbilicated appearance to the end of the eighth or ninth day.

This is the proper period for obtaining the virus. 3. The third period commences on the eighth or ninth day, when the vesicle has acquired its full development, and is surrounded by a bright red areola, varying in size from three or four lines to two inches, the development of which is accompanied with considerable tumefaction of the skin, and of the subcutaneous tissue. This erythematous ring is often the seat of small vesicles. These characters are well marked on the tenth day, when febrile symptoms, engorgement of the lymphatics of the arm, and a roseolous rash, often supervene. 4. The fourth period commences on the tenth day. The areola begins to fade, the serous fluid becomes purulent, desiccation commences at the centre, the tumefaction subsides, and the vesicle is speedily transformed into a hard, dark-brown circular scab, which becomes blackish, and falls off from the twentieth to the twenty-fifth day from the date of vaccination. When it is detached, a depressed, circular, and honeycomb-looking cicatrix remains, with several depressions at its base, indicating the number of the cells of the vesicle. The mark of this cicatrix is indelible. Accidental eruptions of similar character may be produced by the application of the vaccine matter to other parts by the nails, contaminated by scratching the place of its insertion. General vaccine eruptions over the whole body sometimes result from the insertion of the vaccine virus.

Such is the regular progress and form of vaccinia, and these are the characters which it should present in order to fulfil the intended object. When the eruption does not pursue the course above described, it is called false cow-pox, and never prevents the occurrence of variola. It often happens that instead of a vesicle a true pustule is formed. The inflammatory symptoms appear on the same day, or that following vaccination. The puncture is surrounded with a deep-red areola, the pustule increases rapidly, and is raised at the centre. On the fourth or fifth day it is replaced by a brown scab, which does not remain long, and never leaves a cicatrix behind. The eruption may also assume a purely vesicular character, but in neither case will it prevail against variola.

Willan has described three varieties of false cow-pox. 1. In the first, the vesicle is perfectly formed, but the areola does not appear, neither does the inflammatory blush, commonly observed about the ninth or tenth day. 2. In the second, the vesicle is pearly-coloured,

much smaller than that of true vaccinia; it is flat, the circumference is not round, nor does it extend beyond the base, which is hard, inflamed, slightly raised, and encircled with a deep-red areola. 3. In the third variety, the vesicle is also small, it is acuminated, and the areola, which is sometimes of a pale red colour, is much extended or spread. In the two latter instances, the areola appears about the seventh or eighth day, and disappears on the tenth. The scab and cicatrix which follow are smaller, and more irregular than those of vaccinia proper. It is the opinion of some practitioners, that even if the vaccine vesicle pursues a regular course, the formation of purulent matter after the ninth day, and also a small and brittle scab, should lessen our confidence in its protective power. The same effect is also supposed to arise from rubbing or scratching the vesicle, so as to interfere with its natural course, as well as from opening it too frequently for the purpose of extracting lymph.

The production of false cow-pox is attributed to the following causes. 1. From inoculating with vaccine virus individuals who have been already vaccinated, or who have had small-pox. 2. From inoculating with the virus of a false vesicle, or from genuine vaccine matter taken at too late a period from the vesicle. 3. From the complication of scarlatina, measles, gastro-enteritis, or from the existence of some chronic cutaneous disease, as prurigo, eczema, porrigo, lepra, &c. But at the present time we seldom meet with false cow-pox; in the great majority of cases it either fails entirely, or goes through its regular course. Hence the two most important questions to be solved now are, why genuine cow-pox is not perfectly protective, and after what length of time it loses its antivariolous power.

Dr. Boyce, of Edinburgh, in a work published in 1809, advanced the opinion that vaccination produced two distinct effects in man: the local, which is incapable of protecting the system against variola, and the general, which affords protection, and consists of a certain amount of febrile disturbance. With the view of ascertaining whether the system had undergone this change, which is alone capable of affording the desired protection, he proposed the plan of vaccinating the person a second time, four, five, or six days after the first vaccination, and if the constitution is under the vaccine in-

fluence, the vesicles of the second vaccination will mature at the same time as the others. This is called Boyce's test. More recently Eichorn has attributed the preservative power of vaccination to the fever which almost immediately follows the insertion of the virus, which he considers to be destructive to the predisposition to variola.

Diagnosis.—The pathognomonic characters of this eruption have been so fully described already, it is unnecessary to repeat them here; indeed, vaccinia can hardly be mistaken for any other cutaneous eruption by persons who are at all familiar with that eruption.

Treatment.—Cow-pox is a very simple affection, and is hardly ever accompanied with any other phenomena than the local symptoms of the eruption. In some rare instances it excites slight febrile disturbance, and an erythematous rash; but even in these cases, it requires no other treatment than regimen, diluents, and some cooling drinks. The part should be protected from rubbing against the clothes. In cases where the vaccine eruption supervenes on the hands of ostlers having the care of horses with the *grease*, the following remedies may be necessary: acidulated lemonade, emollient local baths, sometimes poultices to diminish the swelling, a few tepid baths, and mild laxatives. If the eruption does not appear in the regular form, and pursue the natural course, the patient should be vaccinated anew. However, even when it appears in a regular and healthy form, the body is often not protected from an attack of small-pox; but if the latter should supervene, it generally assumes a mild character.

The authors here enter into an elaborate account of the results of re-vaccination, so extensively practised within the last twenty years, in several of the continental countries. They refer especially to the edict of the Prussian government, enforcing re-vaccination amongst the troops of that country, also to the experimental researches of Heim (*Historische Critische Darstellung der Pockenseuchen,*) and express themselves thus concerning the merits and necessity of re-vaccination :—That the periods defined by Heim and Gregory, when the vaccine virus loses its anti-variolous power, and consequently when re-vaccination becomes necessary, are not fully established. According to the former writer, the period of exemption is seventeen years, according to the latter, fourteen years. That

they have frequently observed modified small-pox in persons newly vaccinated, distinctly resulting from variolous contagion, and which had been described as cow-pox: also that they have seen the mildest form of modified cow-pox in persons who had been vaccinated twenty-five years previously, evidently showing that the vaccine virus had not lost any of its modifying power during that long period. They are by no means so sanguine as the German writers in favour of re-vaccination, and of the prophylactic advantages to be derived from it; but with the view of regenerating the cow-pox virus, they recommend the method of M. Wanner, of Rambouillet, which consists in inoculating the udder of the cow with virus taken from the human subject, although aware that this plan had been adopted formerly without success.

[Dr. Gregory had latterly altered his opinion as to the prophylactic power of vaccination, and the year previous to his death, he expressed himself, in a discussion on this subject at the Royal Medical and Chirurgical Society, in terms by no means favourable to the anti-variolous power of the vaccine virus. In fact, that it was fast losing its former effect. He denied the identity of small-pox and cow-pox, which he regarded as antagonistic diseases. There is a statement in Hufeland's Journal for 1841, by Dr. Leihtonstein, to the effect that matter taken from pustules caused by potassio-tartrate of antimony will produce vesicles closely resembling those of vaccinia, and that after inoculating and re-inoculating thirty-one persons with this matter, he found them safe from the infection of small-pox, when placed near others having that disease during an epidemic of small-pox. Although small-pox often occurs after vaccination, it is, in such cases, always modified, and runs its course in seven or eight days. The period of life in which small-pox after cow-pox is most likely to occur is between the ages of sixteen and twenty-five, from which it would appear that the period of puberty would be the proper time for re-vaccination. I am disposed to agree with the late Dr. Thomson, to place more reliance in re-vaccination as a positive security than frequently resorting to lymph from the cow. Dr. Gregory says, in his lectures, that lymph, recently derived from the cow, possesses so much intensity, and fixes itself with so much more of a poisonous character upon the skin than lymph long habi-

tuated to the human constitution, that a single incision made with it is equivalent to six or eight made with lymph of minor energy.* The utility of re-vaccination has been well illustrated in the Prussian army since 1833. In fact, small-pox has been almost entirely extirpated. In Wirtemberg only one case occurred in five years out of 14,384 re-vaccinated soldiers, and only three in 29,664 re-vaccinated civilians. And M. Chomel says, if anything can lead to the extirpation of small-pox, it is re-vaccination upon the most extensive scale.—*L'Abeille Méd.*, Feb., 1851.

The following are some of the most important conclusions embodied in the report of the committee on vaccination of the French Academy of Sciences, Feb., 1845:—

1. Small-pox rarely attacks those who have been vaccinated before the age of ten or twelve, from which period up to thirty or thirty-five, they are particularly liable to small-pox.

2. Vaccine matter taken directly from the cow causes local symptoms of greater intensity; its effects are also more certain than those of old vaccine matter; but after being transmitted for a few weeks through the human system, the local intensity disappears.

3. It is prudent to regenerate vaccine matter as frequently as possible, to preserve its protective power, and the only mode of doing this deserving of confidence, is to procure it from the cow.

4. Re-vaccination is the only known method of distinguishing those vaccinated persons that remain protected from those that do not.

5. The success of re-vaccination is not a certain proof that the person in whom it succeeds was liable to contract small-pox; it merely establishes a tolerably strong presumption that he was more or less liable to take it.

6. In ordinary periods, re-vaccination should be practised after fourteen years, but earlier during an epidemic.—B.]

ECTHYMA.

Syn.—*Phlyzacia; Agria; Scabies fera; Furunculi atonici.*

Hippocrates frequently employs the word ἐκθύματα to designate various eruptions of uncertain origin. His translators have ren-

* Lectures on the Eruptive Fevers, &c.

dered the term ἐκθύμα from ἐκθύειν (*cum impetu ferri*) by the word *pustula*. From that period until Willan wrote, the phrase "*pustular* inflammation" had been applied in the most vague manner to a variety of eruptions essentially different from each other. We shall adopt the name Ecthyma, and use it in the same sense as Willan, and subsequently Biett, have done.

Ecthyma is a disease of the skin, characterized by large round phlyzaceous pustules, almost always distinct, and seated upon a hard inflamed base. These pustules are succeeded by thick, dark-coloured scabs, which leave slight superficial cicatrices behind them, or more frequently, red stains, which disappear after a certain time. This eruption may appear on every part of the body, more especially on the neck, the shoulders, the buttocks, the extremities, and the chest. The pustules are seldom developed on the face or on the scalp. Although they are generally distinct from each other, they may, however, spread over a large surface, even over the whole body, but they are usually confined to some particular region.

Causes.—Ecthyma is frequently produced by distinctly apparent causes: it is also sometimes developed spontaneously. In the first instance, it is often the result of irritating applications to the skin; thus, for instance, the characteristic pustules of ecthyma are frequently produced by friction with tartar emetic ointment. The pustules are usually set close together, the epidermis is always elevated for a considerable extent by a sero-purulent fluid, and this elevation is in general umbilicated. They continue for several days, and are then succeeded by scabs, which begin to form in the centre; the accompanying inflammation is sometimes pretty severe, but it does not occasion any inconvenience, inasmuch as it is often desirable to establish this condition as a curative measure. It must not, however, be allowed to become intense without having recourse to emollients.

Idiopathic ecthyma is often the result of handling pulverulent and metallic substances; hence it is so frequently seen in grocers and masons. Ecthyma is also developed spontaneously, and in general appears to be symptomatic of some peculiar condition of the economy. It attacks all ages, and appears in every

season, but it most frequently appears during the spring and summer in young persons and in adults. Women are sometimes affected with it during pregnancy. It appears to result in the majority of cases from great exertion, fatigue, bad food, want of cleanliness, and intense mental emotions. It is likewise developed in the advanced stages of certain chronic affections of the skin, as lichen, prurigo, and especially scabies; or during the convalescence of some of the acute diseases, as scarlatina, measles, and variola. Finally, chronic inflammation of some of the internal organs may have considerable influence on the production of ecthyma, and in some rare cases an eruption of ecthymatous pustules has appeared during the crisis of gastro-enteritis. Ecthyma may be altogether partial, and confined to one particular spot, when its duration varies from one to two weeks; or it may be general, appearing on every part of the body at the same time, usually by successive eruptions, and continue for weeks and even months.

Symptoms.—When the disease is partial, the eruption appears at once; but it more commonly shows itself in successive crops. It usually commences with the evolution of red, inflamed, circumscribed spots, which attain a considerable size in the course of a few days. Their apices soon contain pus, whilst their bases are hard, circumscribed, and of a deep red colour. The fluid dries up in three or four days; and pretty thick scabs are formed, leaving dark red stains behind when they fall off. The pustules are in general distinct; they sometimes form irregular groups, and vary in size from that of a pea to that of a shilling, and beyond. The eruption is occasionally accompanied with very severe pain. In some instances suppuration takes place rapidly; in others slowly, not for several days. Sometimes the pus forms in small quantity, and occupies the apex of the pustule alone, the base of which is broad, hard, and inflamed. The epidermis is often raised considerably, so as to form a bulla. The purulent fluid seems then to be confined beneath by a thin circular layer of transparent serous fluid. This appearance presents especially when the pustules are formed on the hands and feet. Some of the pustules terminate by resolution, and slight whitish incrustations appear successively on the sur-

face: but generally they are succeeded by thick, adherent scabs, which, on falling off, leave a deep red patch, and in some rare instances a cicatrix. When the eruption is successively developed for a considerable period, the red patches become very numerous and confounded together, giving a peculiar appearance to the diseased surface, which is only to be seen in ecthyma. Sometimes to these pustules succeed deep ulcerations, particularly those of the lower extremities which follow scarlatina and small-pox. They are then greatly inflamed round the base, the scabs are thick, and the ulcerated surface is in general dull, sanious, bloody, painful, and always unhealthy looking.

Ecthyma frequently occurs in weak, ill-fed, cachectic children, especially during the convalescence of gastro-enteritis, when accompanied with distended abdomen. The size of the pustules is generally irregular in these cases, and a small pimple may often be seen close by a large pustule. They are of a circular form, and their colour is more or less red, according as the child is feeble and debilitated. The large pustules frequently suppurate, and, after a lengthened period, terminate in a small cicatrix; but often, after threatening suppuration, they gradually diminish, and terminate by desquamation.

In old, irritable persons, much addicted to drink, a variety of ecthyma is often observed, the *ecthyma cachecticum* of Willan, having much resemblance to rupia. It generally forms on the limbs, but every part of the body is subject to it. The skin is inflamed, and more swollen than in the common forms of the disease. It assumes a deep red colour, and in about six or eight days the cuticle is raised over the pustule, is blackish, and infiltrated with blood. It soon bursts, and forms a thick dark scab, raised at the centre; the edges are hard, callous, and more or less inflamed. The scabs are very adherent, and do not become detached for several weeks—sometimes for months. If they fall accidentally, an unhealthy ulceration ensues, and the scab is with difficulty removed. Sometimes febrile symptoms precede or accompany the eruption, but they generally disappear with the disease. Sometimes engorgement of the lymphatic ganglions accompanies this affection, which it will be necessary to reduce by local bleeding, and by emollient applications. Suppuration and desiccation are the

usual terminations of ecthyma. Resolution and ulceration are much more rare.

Diagnosis.—The pustules of ecthyma are generally easily recognised by their size, their inflamed base, and their mode of development. These characters are sufficient to prevent them from being confounded with those of acne, impetigo, sycosis, and porrigo. However, when the pustules of acne and sycosis are accompanied with a hard red base, as they often are, they might be mistaken for the *phlyzaceous* pustules of ecthyma, if the induration more than the inflamed base of the former, and other peculiarities, which are always to be detected, did not obviate this error. The umbilicated pustules of variola, and the multilocular pustules of vaccinia, together with their contagious nature, will prevent their being confounded with ecthyma.

It is more difficult to distinguish the eruption of ecthyma from that of syphilis, especially as the latter sometimes presents the same physical characters as the former. In these cases the copper-coloured areola, the history of the case, and the accompanying symptoms, form the basis of our diagnosis. Ecthyma cannot be confounded with scabies, if we recollect that one is a vesicular and the other a pustular disease; and if a few pustules should appear amongst the vesicles, the respective characters of scabies and ecthyma will enable them to be distinguished at a glance. Besides, the small vesicles intermingled with the pustules will remove all doubt.

Ecthyma may be distinguished from furunculi, by bearing in mind that in the former, the inflammation proceeds from without inwards, whilst in furunculi it commences in the subcutaneous cellular tissue, which becomes mortified to a certain extent. It then proceeds outwards, and forms an opening, by which the dead tissue is expelled. Finally, rupia resembles ecthyma so much, that these two affections often appear to be mainly varieties of the same disease. Ecthyma lucidum, in which the epidermis is raised by dark coloured blood, and succeeded by a very thick scab, covering an ulcerated surface, is much more difficult to distinguish from rupia than the simpler varieties of that disease. The phlyzaceous pustules of ecthyma simplex resting on a hard and inflamed base, and followed by misshapen scabs and superficial excoriations, differing enough from elevations of the epidermis by a sero-purulent

fluid, which constitute bullæ, and succeeded by prominent scabs resembling an oyster-shell and covering deep ulcerations, are sufficient to distinguish that form of ecthyma from rupia.

Prognosis.—Ecthyma is not a dangerous affection. The prognosis varies according to the extent of the disease, the age and condition of the patient, and the nature of the accompanying lesions.

Treatment.—When the eruption is mild, partial, and follows a regular course, it merely requires diluents, simple or emollient baths, and attention to diet. If it assumes a severe form, and is accompanied with much inflammation, a moderate bleeding, or the application of leeches, may be resorted to with advantage. When the disease is of long standing, and the constitution of the patient deteriorated, hygienic measures should form the principal part of the treatment. The patient should take moderate exercise, and nourishing food, together with simple or slightly-stimulating baths, as the alkaline or salt-water bath. Mild laxatives are very beneficial. Spirituous liquors, and excesses of all kinds, should be particularly avoided. Tonics, as quinine, iron, &c., are sometimes required. Emollient applications ought to be employed when the ulcers are inflamed, and difficult to heal. It is sometimes necessary, on the other hand, to excite the surface with nitrate of silver, or some stimulating lotions. Muriatic acid, diluted with water, is very efficacious in altering the condition of the parts, which under this treatment assume a more healthy aspect, and soon cicatrize.

[The chronic form of ecthyma is generally the result of a cachectic state of the system, and imperfect nutrition. In these cases, the gastro-intestinal mucous membrane is more or less involved, and the early treatment should be directed entirely to this point. Alteratives, as the hydrargyrus cum creta, or the iodide of mercury, in combination with mild opiates, are the most appropriate remedies for allaying the irritability of the mucous membrane. As soon as the irritation has subsided, and the stomach will bear them, the mineral acids in some bitter infusion, as gentian, or the citrate of iron in infusion of hops, will be found very serviceable. As this disease frequently occurs in children, strict attention to diet and cleanliness is indispensably necessary, and particularly the frequent use of the warm bath.—B.]

IMPETIGO.

Syn.—*Dartre crustacée; Lèpre humide;* Crusted Tetter; Running Tetter; Cowrap.

Impetigo is a non-contagious disease of the skin, characterised by an eruption of psydraceous pustules, most commonly grouped in clusters, and forming thick, yellowish, rough incrustations. When the pustules of impetigo are grouped together, forming circumscribed patches of different forms and extent, they constitute the variety described by Willan as *impetigo figurata.* When they are scattered, and do not assume any particular order, they form the *impetigo sparsa* of the same author. Each may assume the acute or chronic form. There are many intermediate varieties between them, which have characters peculiar to themselves.

Impetigo figurata occurs most frequently on the face, and especially on the cheeks; it is, however, often met with on the extremities, and even on the body, and usually attacks children during dentition, young persons of both sexes of a lymphatic or sanguineous temperament, with a fresh colour and fine delicate skin. It appears most frequently in spring, and some individuals are periodically affected with it for years. Its development is not accompanied with any other symptoms than those of headache and slight indisposition. When impetigo figurata is developed on the face, it frequently appears in the form of small, distinct, red, and slightly-raised patches, which are soon covered with small pustules, nearly confluent. These patches may remain isolated, or else become united by the formation of pustules in their interstices. The eruption is often much more extended, and the inflammation more intense. Thus, for instance, both cheeks, and even the chin, may be affected at the same time. A certain degree of constitutional disturbance exists in these cases, and the eruption is frequently preceded and accompanied by a kind of erysipelatous inflammation.

The eruption is pustular from the beginning, and the pustules are small, confluent, and very slightly raised above the level of the skin. They burst between thirty-six and seventy-two hours from

their formation, and discharge a purulent fluid. The heat, itching, and tension are then increased. The fluid is abundantly discharged by numerous small orifices; it soon dries up, and forms thickish, yellow, friable, semi-transparent incrustations, which have some resemblance to the gummy exudations of certain trees, or to layers of concrete honey. The discharge continues, the scabs increase in thickness, and it is in this condition that the patient generally applies to the physician. The scabs form on a red, inflamed, and irregularly-rounded patch, whence exudes a sero-purulent fluid in variable quantity. There still remains a few isolated psydraceous pustules around the periphery of the inflamed surfaces, and on others the discharged fluid is scarcely concreted. When the disease is not prolonged by successive eruptions, it remains in this incrusted condition from two to four weeks. The itching and heat then subside, the exudation diminishes, and the scabs are gradually but irregularly detached, leaving a red and tender surface behind. An ichorous fluid may be discharged from minute pores, which sometimes exist underneath, and give rise to the formation of new scabs, which are thinner. Finally, when the incrustations have altogether disappeared, the skin remains red, shining, and tender for a considerable time, during which the slightest irritation will reproduce the disease.

This variety may first appear on a small detached surface, and ultimately spread round the circumference by the successive development of psydraceous pustules. Desiccation commences in these cases at the centre. Impetigo figurata is sometimes prolonged for weeks, and even for years, by the successive development of the eruptions, and is then chronic in its progress, while the fresh pustules keep up an acute state. The chief causes which prolong the disease in this manner are intemperance, high living, irritating applications, as caustic, for example, and the injudicious employment of the preparations of sulphur. The skin may become deeply inflamed and indurated in these cases; but it never presents that peculiar roughness which is observed in those varieties of chronic impetigo figurata that are confined to the extremities. This variety sometimes occupies but a very limited surface on the face; it is confined to the eyelids, on the middle of which prominent conical incrustations are formed. It produces a state of chronic ophthalmia, which

is often very troublesome. In other instances the eruption appears on the upper lip, exactly like a pair of moustaches.

Impetigo figurata may also appear on the extremities, and even on the trunk. When it affects the lower extremities, the inflamed patches are in general large, and of irregularly-oval form, whilst on the upper extremities they are more circular and less extended. The pustules are developed in the same manner as on the face, and are speedily replaced by thick yellowish-green or brown scabs. When these are detached, they are succeeded by others produced by the desiccation of the sero-purulent fluid discharged by the inflamed surface. Impetigo figurata may assume a chronic form. It then appears only from time to time on small portions of the inflamed patches, near their circumference; and the successive eruptions and large crops of pustules of the acute variety are never present. The cuticle is inflamed to a certain depth, and it acquires a remarkable degree of thickness. In the same person may be seen scabby patches, of different sizes and form. Sometimes a large incrustation is seated on the inner side of the thigh, whilst in other cases the same product is developed on the outer side, or on the leg, and even on the abdomen. In some cases the pustules never appear, and the disease is recognised merely by the peculiar form of the patches, and the presence of the scabs. When the cure is being effected, the heat and itching diminish, the discharge becomes less abundant, and the scabs thinner; the edges commence drying up, and the surface ceases gradually to be covered with incrustations; but the natural colour of the skin is slow in returning.

Impetigo sparsa differs from the preceding variety merely in the irregular and scattered distribution of the pustules; otherwise it pursues the same course, and produces the same kind of thick, rough, and greenish-yellow scabs. This variety appears most frequently during autumn, continues the whole of the winter, and disappears on the return of warm weather. It has a greater tendency than impetigo figurata to pass into the chronic state. Although impetigo sparsa may present itself on any part of the body, it most frequently attacks the extremities, especially the legs and the bends of the joints. Sometimes it is confined to a single region, in other cases it covers the whole limb. The pustules are scattered, are accompanied with a smart itching, and soon burst. Yellow

incrustations are formed by the partial desiccation of the sero-purulent fluid. They are red, thick, friable, and very different from the laminated incrustations of eczema; they cover the whole of the diseased surface, but some scattered pustules are always to be seen. When the scabs fall, either naturally or from the treatment adopted, an inflamed surface remains, with one or two scattered superficial excoriations. A sero-purulent fluid exudes from this surface, speedily saturates the dressings, lint, &c., and, by its partial desiccation, reproduces the scabs. In persons advanced in years, and of a debilitated constitution, the scabs acquire a considerable degree of thickness, and a deep brownish-yellow colour, not unlike the bark of a tree, hence the name *impetigo scabida*. These incrustations sometimes encase the whole limb, the movements of which become painful and difficult, and are accompanied with heat and a distressing itching. The crusts soon fall off, and are speedily replaced by others. When the disease is intense, and occupies the lower extremities, it is sometimes complicated with anasarca, and extensive ulcerations. When it extends to the toes, the nails are often destroyed, and when regenerated, thick and rough, like those seen in some cases of lepra and psoriasis.

Although impetigo is not generally accompanied with febrile symptoms, it sometimes, however, assumes an inflammatory character. In these cases it is accompanied with much constitutional disturbance, fever, burning itching, and erysipelatous inflammation, (impetigo erysipelatodes. Willan). Biett used to describe another variety, which is rarely met with, and is sometimes confounded with impetigo erysipelatodes, and sometimes with an ulcerated syphilitic eruption, the *impetigo rodens* of authors. It seems to destroy the tissues in which it is developed. The duration of the disease varies from three to four weeks, or it may even be prolonged indefinitely.

Causes.—Impetigo often results from the application of irritating substances to the skin, as from handling brown sugar, lime, metallic filings, &c. It appears in all seasons, but especially during spring and autumn, and principally affects children during dentition, females at the critical period, and persons of a lymphatic or sanguineous temperament with a fine delicate skin. Excess in diet, violent exercise, strong mental emotions, as grief, fear, &c., some-

times produce the disease. It is often complicated with other diseases of the skin, especially with lichen.

Diagnosis.—The presence of *psydraceous* pustules, in clusters, or scattered, which are succeeded by thick rough and yellow scabs, is sufficient to distinguish impetigo from the vesicular or vesiculo-pustular eruptions of eczema, which, on the contrary, are succeeded by thin laminated scaly crusts, with a few vesicles scattered here and there. When impetigo figurata appears on the chin, it requires some attention to distinguish it from sycosis. In impetigo the pustules are small, yellow, and set close together. The exudation is considerable, the incrustations are thick, yellowish green, and semi-transparent; besides, there are no indurations or tubercles. The pustules of sycosis, on the other hand, are larger, isolated, more raised, and less yellow than those of impetigo; the exudation is by no means so copious, the scabs are drier, of a deeper colour, and are only reproduced by a new eruption, not by a cutaneous discharge.

Impetigo of the hairy scalp may be mistaken for porrigo.* The peculiar pustules of porrigo favosa, imbedded in the epidermis, and terminating in yellow umbilicated scabs, and also those of porrigo scutulata, which, owing to their being agglomerated, still more resemble impetigo, are sufficient to distinguish them; besides, those varieties of porrigo are contagious, and cause the hair to fall, symptoms which are not characteristic of the impetiginous eruptions. When itch is complicated with impetigo, it requires but little attention to detect the vesicles. It should be borne in mind that the pustules, which in the majority of instances are merely complications, are either psydraceous pustules of impetigo, or phlyzaceous pustules of ecthyma.

The thick scabs which appear on the face during the syphilitic eruption have been mistaken for impetigo. But a physician who could commit such an error must be entirely unacquainted with the differential diagnosis of the diseases of the skin. The large,

[* Impetiginous eruptions frequently occur on the face of young animals, but they are so imperfectly described by veterinary writers, that it is almost impossible to identify them. For example, it is difficult to tell whether the tinea contagiosa of cats, a very common disease, is a porrigo or an impetigo.—B.]

thick, blackish, and very adherent incrustations, seated on a violet-coloured surface, and surrounded with several indelible cicatrices which terminate in deep ulcerations, a certain rounded form of the eruption taken on the whole, and a peculiar aspect, which once seen can never be mistaken, are sufficient to prevent the occurrence of so serious an error.

Prognosis.—Impetigo is not a dangerous disease, but it is nevertheless exceedingly troublesome and often very repulsive. The physician should be on his guard not to promise a speedy cure, a circumstance which rarely occurs. The disease is very obstinate in persons advanced in years and with a broken-down constitution, and on the other hand, it is more manageable in young and robust subjects, especially if it assumes an acute form.

Treatment—The preparations of sulphur have been too generally recommended in impetigo. Their indiscriminate employment is often decidedly injurious, especially in the early stage. When the disease is limited, and the local symptoms mild, emollient lotions of marshmallows, decoction of poppy heads, bran, or almond emulsions, are the best applications that can be used; refreshing acidulated drinks should at the same time be administered to the patient. But if the disease spreads, and covers the greater part of the face, general and local bleeding will often be required, and should be regulated according to the strength of the patient. Bleeding from the foot, and the application of leeches to the mastoid processes, or to the arms, will generally suffice. When the face is the seat of the disease, venesection may be advantageously employed during its progress, as well as at its commencement, especially when it has been aggravated by the use of injudicious remedies. In addition to the lotions just mentioned, mild laxatives may be administered with advantage.

Baths, at a temperature between 88 and 90 Fahr., are often useful, even when the face is affected, in diminishing the general irritation. If they are employed at a higher temperature, they will probably produce cerebral congestion. When the inflammation subsides, emollient lotions, with a little alum in them, will be found very beneficial. Towards the termination of the disease, when it seems to be slow of disappearing, baths and the vapour douche are very useful in altering the condition of the skin to healthy ac-

tion. It is sometimes necessary to have recourse to more energetic measures than the foregoing, and in these cases purgatives, as calomel, the sulphates of soda and potash, jalap, and castor-oil, are then indicated. The patient may take at the same time, acidulated drinks, in the proportion of from fifteen minims to half a drachm of sulphuric acid to the pint. Tepid and alkaline, local and general baths, and alkaline local applications are also beneficial in these instances. The alkaline lotions may be alternated with acidulated applications occasionally. It is very desirable to remove as much as possible of the incrustations from the diseased surfaces, and this is most readily accomplished by the frequent and prolonged employment of tepid baths.

It is when impetigo assumes a chronic character that the sulphureous preparations are really useful. The sulphur waters, either in baths or administered internally with milk, are then most frequently employed. The salt water bath has sometimes effected a radical cure of this form of the disease. The vapour bath, and particularly the vapour douche, are often very efficacious if applied to the patches of *impetigo figurata* when they have passed into a chronic state. The doùche should be continued from ten to twenty minutes, and should be kept a certain distance from the patient. These measures, judiciously employed, usually overcome the most rebellious forms of impetigo ; they are almost exclusively required for old and feeble patients. They may, however, be enforced in young and robust subjects, if the nature of the disease seems to require them.

There are some cases in which all these measures seem to fail; in this event the diseased surfaces may be cauterized with the diluted acids. Hydrochloric acid is generally preferred, as it is supposed not to produce cicatrices ; but this is not correct, and any other acid will fulfil the same end by altering the condition of the skin. A weak solution of nitrate of silver, or some dilute acid may be applied with a feather passed over the surface, and water should be poured upon it immediately afterwards, in case the acid be too strong. Much care and attention are required in using these remedies. The proto-nitrate of mercury, in the form of an ointment, has often been applied with success. The oxide of zinc and acetate of lead ointments are also useful. When the disease is limited, a blister applied to the diseased parts has often proved beneficial in

altering the vitality of the skin. If all these remedies should fail, we must have recourse to the arsenical preparations, as Pearson's or Fowler's solutions, which are generally followed by the most surprising effects. Pearson's solution is in the majority of cases sufficient to produce a perfect cure.

A description of the *achores*, which are merely varieties of impetigo, although falsely classed by Willan amongst the porrigos, naturally follows the foregoing. They are characterised by small, superficial, confluent pustules, having no regular order, and seated on an inflamed base. After the lapse of a few days they burst, and a fluid escapes, which concretes and forms large brown scabs, composed of several layers placed over each other, and very different from the thick incrustations which succeed the *fari*. These two varieties have been described under the names of porrigo larvalis and porrigo granulata, until Biett assigned to them their proper place.

IMPETIGO LARVALIS.

Syn.—*Tinea facici*—Frank. *Porrigo larvalis*—Willan. *Achore*—Alibert.

Impetigo larvalis is characterised by an eruption of superficial pustules of a whitish-yellow colour, more or less confluent, and arranged in groups. These pustules are succeeded by yellow and greenish scabs, sometimes thin and laminated, sometimes thick and rough, which have the greatest resemblance to those of eczema impetiginodes and impetigo figurata. This disease is seen most frequently in young subjects, especially infants. It may appear on any part of the body, but the hairy scalp, the ears, and the lips, are its favourite situations. The face is sometimes almost completely covered with thick crusts in the form of a mask, hence the name of *larvalis*. There are several varieties of impetigo larvalis, resulting altogether from the degree of the existing inflammation, and the thickness and extent of the crusts. In very young infants the disease consists solely in the formation of small pustules, which spread over the scalp, temples, &c., producing incrustations of variable size, but generally thin, which have been described by

writers under the name of *crusta lactea.* In these cases the disease is ordinarily exceedingly mild, but it is often pretty severe when it appears on the face or scalp, or on both at the same time, as well as on other parts of the body.

Symptoms.—When the disease is about to appear on the face, it usually commences with the formation of a few small pustules on the forehead and cheeks, grouped together, and having an inflamed base. They are accompanied with smart itching, and soon burst, either spontaneously or by being scratched with the nails. A viscid yellowish fluid escapes, which forms thin soft incrustations of a yellowish green colour. The exudation continues, new crusts form, the first increasing in thickness, and in some parts they are thick, soft, and round, whilst in others they are thin and laminated. On falling off, a red inflamed surface remains, on which new scabs are formed, but the exudation is often so considerable that it does not concrete. The surface of the cuticle then becomes exposed, from which an acrid viscid fluid exudes by innumerable small orifices. When the disease is diffused, the itching and even the pain are very severe, and the face, with the exception of the nose and eyelids, which are always exempt, is concealed as if with a mask.

In other cases the pustules are larger, and are developed behind the ears, round the mouth, upon the chin, &c., terminating in thick, yellowish-green crusts. In some instances the mouth is surrounded with large and thick yellowish incrustations, which are of a deep brown colour in some parts where the fluid is mixed with blood. The movements of the lips are exceedingly painful in these cases. In other instances, again, these large incrustations form only behind the ears. They emit a nauseous odour. The lymphatic ganglions sometimes inflame, and even suppurate, and the eyelids may become the seat of chronic inflammation. Coryza, and a copious discharge of mucus by the nares, frequently occur. When the disease begins to decline, the exudation gradually diminishes, the scabs are not formed so frequently, they become thin and white, their bases are paler, and they are soon succeeded by a slight desquamation, which is not long in disappearing. A light rosy tint only remains on some portions of the diseased surface, which in its turn also fades away. Such is the manner in which this variety usually terminates.

In some cases, however, deep chaps are established, and in others, when all the symptoms seem to have disappeared, a new eruption suddenly breaks out, and the disease commences anew. Cicatrices never form spontaneously, and those which have been mentioned by writers were merely the result of scratching the diseased surface. When this variety occurs on the *hairy scalp*, the pustules are set close together, of a yellowish-white colour, and sometimes occupy the posterior part of the head only, whilst in other instances the disease appears on every part covered with hair. These pustules are very small, and are mixed with vesicles, some of which are purulent and others transparent, and are accompanied with smart itching; they soon burst, or, as more frequently happens, they are torn, and throw out a thick viscid fluid, which mats the hair together, and forms irregularly-shaped scabs of a brownish-yellow colour. The scabs are either scattered or confluent, and spread over a surface of variable extent; the exudation continues, and if the hair is long, and not properly attended to, the scalp becomes covered here and there with a thick brownish crust, which dries and cracks into several friable pieces.

When these incrustations are thick and extended, and if the patient has injudiciously applied linen cloths to the head, the latter become saturated with the fluid, and adhere to the parts for months together. A fœtid and disgusting smell is given off when they are at length removed, and the hair abounds with lice, which aggravate the pruritus. On the other hand, when the scabs are carefully raised by means of emollient lotions, the surface beneath is but slightly inflamed and slightly excoriated, from which exudes, through a vast number of pores, a nauseous viscid fluid. Sometimes the subcutaneous cellular tissue becomes inflamed, and small circumscribed collections of matter form, which frequently have to be opened. When the disease is of long standing, and the incrustations firmly adherent, the hair sometimes falls off from some of the diseased parts; but this is merely a temporary baldness, and very different from that which follows porrigo favosa and porrigo scutulata. The bulbs of the hair are not destroyed, they are only inflamed, and new hair soon grows again, as if the parts were never affected. In addition to the localities already enumerated, this disease may extend to the trunk, and even to the limbs. In

these cases the pustules appear to be smaller, more scattered, and the scabs thinner. The duration of the disease is very variable; it is, however, always obstinate, and generally continues for several months.

Causes.—Impetigo larvalis is not a contagious disease; it chiefly attacks children during the periods of dentition. The causes of this eruption are very obscure; it appears in strong, well-fed children as well as in those of an opposite condition. Want of cleanliness frequently produces it. Adults are pretty often affected with this disease.

Diagnosis.—The characters mentioned elsewhere as belonging to porrigo favosa and porrigo scutulata are so striking, that these diseases can scarcely be confounded with impetigo larvalis. It is more difficult to distinguish impetigo larvalis from some other varieties of the same genus, in which the order of development and the form of the scabs are precisely the same. The peculiar seat of the disease, and its degree of severity, are the only data we have for guiding us in the diagnosis.

Prognosis.—Generally speaking there is little or no constitutional disturbance during this disease. Gastro-intestinal irritation and diarrhœa, however, sometimes supervene, and the infant wastes. In general, the prognosis is not unfavourable, and the eruption is troublesome in proportion as it is accompanied or followed by any severe visceral disease. If it continues for a lengthened period, and has been attended with a copious exudation, it will become more unmanageable, especially when it attacks very young, delicate, and weakly children of the poorer classes.

Treatment.—In most cases, lotions of tepid milk and water, or an infusion of marshmallows, which will both allay the troublesome itching and prevent the scabs from increasing, form the whole of the treatment necessary; and when infants at the breast are attacked, the nurse should be desired to wash the diseased surfaces with her own milk. When there is much itching and irritation, tepid emollient baths should be administered. It will also be desirable to change the infant's nurse, if possible, or at least to diminish the quantity of milk, and give in its stead a little gruel or barley-water. Bleeding is not advisable unless the child is two or three years old; and when there is much inflammation present,

one or two leeches applied behind each ear will generally be sufficient. The same treatment will answer when young persons and adults are affected, only that general bleeding may be practised with advantage when there is much local irritation, and a greater number of leeches may be applied behind the ears or over the mastoid processes.

When the scalp is affected, the hair should be cut close, and emollient poultices of bread and milk, or of potato-flour, and an infusion of marshmallows ought to be constantly applied. When the eruption is of long standing, and diffused, we should endeavour to alter the condition of the skin with alkaline and sulphureous lotions, and two or three slight innunctions with ointments of a similar nature, daily. Mild laxatives are sometimes beneficial. In very young infants the syrup of chicory has proved exceedingly successful. In children and adults, from two to four grains of calomel administered every morning, and two drachms to half an ounce of the sulphate of soda in a pint of barley-water, have often produced a speedy improvement in the progress of the disease.

The sulphur douche is also occasionally useful, and when the disease spreads to the trunk and limbs, and is of an obstinate character, sulphur baths alternated with tepid emollient baths should be prescribed. The application of blisters to the arms, as recommended by some writers, generally produces much irritation of the skin. In some rare instances, the eruption of impetigo larvalis seems to establish a certain degree of derivation, by means of which some severe internal disease is removed. Under these circumstances, and especially when the increase of the serous exudation coincides with the decline of the original disease, great care and caution are necessary in proceeding with the treatment. It is often desirable to confine the curative measures to simple palliatives and attention to cleanliness.

IMPETIGO GRANULATA.

SYN.—*Galons. Porrigine granulée*—Alibert.

Impetigo granulata is characterised by the presence of small, isolated, greyish scabs, of an irregular form on the posterior part, or on the centre, of the hairy scalp. These scabs resemble the

debris sometimes observed on the thick incrustations of *porrigo scutulata*, and also certain forms of impetigo larvalis, of which impetigo granulata is but a variety. Children and young persons are more subject to this disease than persons advanced in years. It occasionally attacks adults. Its usual seat is the posterior part of the scalp, but it may spread over the whole of it.

Symptoms.—Impetigo granulata is known by the appearance of a number of whitish-yellow pustules, accompanied with pretty smart inflammation and considerable itching. They are traversed in the centre by a single hair, and burst in from two to four days, when a copious exudation takes place. Rough, brownish scabs are then soon formed, in which the hairs are matted together. After a certain period, when these scabs dry, they present certain peculiarities which distinguish this variety. They are hard, uneven, and embossed, and assume a brownish, or dark grey colour. Small, dry, friable, irregularly-formed incrustations become detached, and remain scattered through the hair which projects from them. The hairs are never destroyed, but when the disease spreads they are found united in groups by the agglomeration of the scabs. A disagreeable nauseous odour is given off, and quantities of lice are seen in the midst of these scabs and in the hair. This odour never exists except in very filthy patients. In more cleanly persons the scabs frequently do not present their distinctive characters, and resemble very much those of impetigo sparsa. The duration of this variety is very variable; it rarely exceeds a few months. When left to itself it often persists for a longer period; but if appropriate measures be had recourse to, and in many cases attention to cleanliness is all that is required, it will terminate in the course of a few weeks.

Causes.—Impetigo granulata is not contagious. Poverty, filth, and privation of every kind, are its predisposing causes. It is not met with so frequently as the other varieties, a fact which is readily explained by the instability of its peculiar characters, depending for the most part on a particular condition of the eruption.

Diagnosis.—The diagnosis is not difficult when rough, brown, or dark-grey scabs, resembling small pieces of dirty plaster, can be seen on the scalp. There are cases, however, in which porrigo scutulata appears with similar incrustations, and many of the

characters of impetigo granulata appear also to belong to porrigo scutulata. The first, however, never presents those large, thick, and continuous incrustations which accompany porrigo in this stage of its course. Besides, if the scabs are removed, the circular form of the patches, and the nature of the pustules of the last-named affection, will readily distinguish it from the other. Impetigo granulata is never contagious, and never permanently destroys the hair. The colour of the scabs and their cupped appearance in porrigo favosa, independently of other characters, are always sufficient to prevent any mistake on this point. It will be more difficult to distinguish impetigo granulata on its first appearance from impetigo larvalis and other varieties of the same order, for the pustules and scabs are almost the same.

Prognosis.—This affection, generally speaking, is not very severe. It is often rebellious and obstinate, although less so than the other varieties.

Treatment.—Our first exertions should be directed to removing the scabs, cutting the hair, and exposing thoroughly the diseased surface. Lotions and emollient applications are the only remedies that can be conveniently used at the commencement, but the patient should at the same time take diluents and laxatives. It is often necessary to continue for a considerable period the emollient applications. When the inflammation of the scalp diminishes, alkaline preparations will be found very beneficial. Lotions, and the sulphur douche, &c., may often be employed with advantage; in short, the treatment of impetigo larvalis will answer likewise in this variety.

[In chronic impetigo, of long standing, the treatment should be constitutional rather than local. I have seen cases of this disease, in which the eruption was kept up by a vitiated state of the constitution for a long time in spite of every kind of local treatment, and yield at length to a course of alteratives and tonics. There are cases, however, in which the vitality of the parts is so altered from the normal state, that active local remedies must be resorted to, as well as general treatment. I have seen good results follow the use, internally, of a mixture containing—

℞ Hydrochlorate of lime, ℥iiss
Distilled water, ℥xvj;

a table spoonful to be taken morning and evening; and at the same time an ointment, composed of one part of calomel to twenty of lard, applied to the diseased parts twice a day—the incrustations being previously removed by fomentations.

Dilute nitric acid, liquor arsenicalis, or the iodide of arsenic, are often necessary in obstinate forms of chronic impetigo, and alkaline and astringent lotions, in preference to ointments, externally.

Citrine, creosote, and iodide of sulphur and lead ointments, are often used, but I have always found more benefit from lotions than from ointments in this disease. M. Cazenave has employed, with good effect, astringent lotions of zinc and tannin:—

℞ Infusion of roses, ℥vj
Sulphate of zinc, gr.xij
Laudanum, ʒss;

or

℞ Infusion of roses, ℥xvi
Tannin, gr. lxv.

The parts to be sprinkled with powdered starch after each application.

The diet must be strictly regulated during the treatment; and for children a milk diet is the most suitable, indeed is indispensable. In the latter class of patients mild saline cathartics occasionally, as the tartrate of potass, are necessary. They will answer better than hyd. cum creta, calomel, or castor oil, and as a tonic, in cases of scrofulous children, the citrate of iron, in some bitter infusion, will be found one of the most useful remedies, if not the most useful.

When impetigo attacks the scalp, lotions may be substituted for ointments with marked benefit. A solution of the nitrate of silver, in the proportion of a drachm to the ounce of distilled water, pencilled over the parts, before the pustules are developed, is very useful in some cases. Although the external use of sulphur in the form of ointment is attended with little benefit in the treatment of the different varieties of impetigo, yet the internal employment of the sulphurous waters is often signally beneficial. The Harrowgate and Moffat waters in England, or those of Barèges or Aix-la-Chapelle, on the Continent, will complete the cure, if protracted.—B.]

ACNE.

Syn.—*Varus; Gutta rosea, or rosacea: Bacchia rosacea;* Coppernose.

The term *acne* (from ἀκνή or ἀκμή) has been applied to this disease by the ancients, because it attacks both sexes at the period of puberty. It is a chronic pustular affection, characterised by small isolated pustules, with a hard, deep red base, leaving behind small, red, circumscribed hard tumours, very indolent and slow in disappearing, the seat of which appears to be the sebaceous follicles of the skin. It appears most frequently from the age of puberty to thirty-five or forty, but in general it is most severe in young subjects. Both sexes are equally subject to it. The parts most commonly affected are the temples, cheeks, nose, and forehead. It also appears on the neck, shoulders, and front of the chest; but the back and upper part of the chest are by far the most frequent seats of the disease. Acne occurs on the back in a number of individuals without appearing on the forehead, cheeks, &c.; and on the other hand, when it appears on the face, the back is rarely attacked. The limbs are never affected unless in those instances where the disease spreads over the body, when the backs of the arms are sometimes studded with pustules.

Willan admits three varieties of acne, each having certain characters of its own. It is, however, impossible to draw well-marked lines of demarcation between them; for the same individual may be affected with them all at the same, or at different periods. These varieties are *acne simplex*, *acne indurata*, and *acne rosacea*. *Acne punctata*, described by the same author as a distinct variety, is merely a complication of the two first, and the tumours consist in a collection of morbid matter in the sebaceous follicles. These follicles open in a blackish point, and the whole appearance gives to the disease a peculiar character. Biett has described another variety, acne sebacea, which is now admitted by most writers.

Acne has been regarded by Willan and Bateman as a tubercular disease. The circumscribed indurations of the skin which have received the name of tubercles, and which are so frequently met

with in this disease, are merely the terminations of the pustules, and not an elementary lesion. The pustules of acne appear to be the result of inflammation of the sebaceous follicles, which is produced and kept up by the accumulation of the matter secreted by these follicles.

Symptoms.—1. *Acne simplex* chiefly affects young people about the age of puberty. It appears on the parts where the whiskers grow or on the forehead; and young girls are often affected with it at the period of first menstruation. Young and robust individuals, in the enjoyment of perfect health, are often affected with this variety, covering more or less of the shoulders and upper part of the chest. The pustules ordinarily appear one after another in the form of small inflamed, indurated spots, which soon become pustular, their base being surrounded with a red areola. They pursue their course singly, without any general symptoms, and usually without pain or local irritation. Indeed, an eruption of considerable extent frequently exists on the back of the patient without his being aware of it. When the disease appears on the forehead in young girls, the pustules are developed simultaneously and in variable number; the face is sometimes covered over with them. In general, when there are many present, the skin appears oily and shining, and suppuration takes place about the eighth day. The pus is formed in small quantity, and produces very thin scales, which soon fall off, and are often scarcely perceptible. In other instances, the suppuration is more abundant, especially when the disease is seated on the back, and thick scabs form, which are soon rubbed off by the friction of the clothes. Even when the pustules are set close together, they never form those broad, thick incrustations sometimes seen in sycosis. A slightly-elevated red spot remains after the fall of the scab, which gradually disappears. In some instances the redness and tumefaction continue; and if other pustules are developed at the same time, the disease may present all the characters of acne indurata. The pustules of acne simplex are often intermingled with small, prominent, blackish points, formed by the sebaceous matter in the follicles; hence the name *acne punctata.*

2. In *acne indurata* the inflammation extends through the folli-

cles. Suppuration proceeds more slowly, and slight indurations of the subcutaneous cellular tissue, of more or less extent, are formed by the union of four or five inflamed follicles. These tumours are sometimes as large as a filbert. This variety generally appears on the face, but it is also often met with on the back, and we have frequently seen it at the Hospital of St. Louis occupying the whole of the posterior part of the body. It often appears in this region in young men. Sometimes it appears in robust and healthy individuals; in other instances, in boys addicted to Onanism, and also in persons subject to irritation of the bowels. Individuals whose business compels them to remain long in a stooping position, and who are much exposed to heat, are very subject to this variety of acne. It may assume a mild character, in which event, a few inflammatory points appear on the temples and cheeks; a pustule gradually rises here and there, and suppuration is not completed for two or three weeks, or longer. New pustules form and suppurate in the same manner as the first, the bases of which remain red and hard, and terminate in chronic indurations of the cellular tissue beneath. The eruption may thus be confined to a limited extent.

But in other cases it is much more intense, and the features are greatly distorted. The face is then studded with livid red indurated tumours; they are most numerous along the margin of the lower jaw, on the temples, on the side of the face and nose. A number of pustules are scattered between these indurations, and also over other parts of the face. Red patches and slight scales are sometimes met with. The skin covering the face is red all over, but this redness is greater on some parts than on others.

Instead of these symptoms, however, a multitude of black points often appear on the nose, the cheeks, and in the intervals between the pustules and the indurated tumours. The skin is then shining and unctuous, the cellular tissue hypertrophied, and the deformity extreme. Nevertheless, the patient's general health is not impaired; he merely complains occasionally of headache and an unpleasant itching about the face. When this variety is confined to the back, it may assume a mild character, or else be attended with all the symptoms just mentioned, with the exception of those of the face. The duration of the eruption is in this case also very pro-

tracted. It disappears very slowly, and is liable to return again. The pustules of acne indurata frequently leave numerous indelible oblong cicatrices, crowded together on the back, as if produced by repeated eruptions.

3. *Acne rosacea* differs from the preceding variety in appearing generally in persons of advanced years, and being accompanied with a certain degree of erythematic redness of the face.

It frequently occurs in females at the critical period, in drunkards, *bons vivants*, and in studious persons; also in individuals subject to hæmorrhoids; and it often results from hereditary predisposition. In the latter event we often find, after exposure to the heat of the sun, or from excess in diet, or violent exercise, a number of irregularly-circumscribed red spots on the face, sometimes confined to the cheeks, sometimes extending over the whole of that region, which gives it a very peculiar appearance. The deep red colour, however, is evanescent. Several scattered pustules are developed at the same time.

In elderly people, the nose is the most frequent seat of this affection. Its point assumes a violet-red colour after the slightest excess in diet, or often after a moderate and simple meal. By-and-by this redness becomes habitual, and imparts a very peculiar expression to the countenance. Pustules form here and there, but suppuration does not take place, or else it is very incomplete, and the redness is deeper in the neighbourhood of the pustules. The disease is sometimes confined to the nose, which, in the course of a short time, acquires considerable size. The veins become varicose, and form bluish irregular lines, which contrast with the intense red or violet colour of the diseased surfaces. The appearance of the nose, however, is more frequently altered than its size. The eruption spreads to the jaws, the forehead, the chin, &c. The red colour is not equally bright in all parts; it is most strongly marked in the neighbourhood of the pustules. Suppuration is always slow and incomplete, more or less induration remains, and the skin continues infected. When the disease remains for some time, the tegumentary covering of the face becomes rough and coarse; and even when it subsides the parts seldom or never resume heir na ural condition.

Acne rosacea is very often connected with some chronic gastro-intestinal affection, or with disease of the liver, &c. The redness is more evident in the evening and after dinner than at any other period. Finally, the disease may disappear and return, in the same individual, with various degrees of intensity. The pustules are very numerous, and the yellow colour of their apices contrasts strongly with the violet hue of the surrounding skin. The features are in all cases altered considerably, and the appearance of the patient is often very repulsive. In addition to the causes already mentioned, mental excitement, cold drinks, irritating local applications, cosmetics, and everything that tends to produce a determination of blood to the head, will produce this disease in persons predisposed to it.

Acne sebacea, first described by Biett, is a purely follicular disease, in which the surrounding skin is scarcely ever involved. The face is the principal seat of this affection, but it may extend to the whole tegumentary envelope. When the follicular inflammation is confined to a limited surface the skin does not lose its natural colour, but is greasy and unctuous in the neighbourhood of the eruption. The local irritation, however, soon increases, as also the morbid secretion, which becomes effused on the skin, and forms a sort of squamous incrustation of various extent.

During the first few days this scaly formation is soft, slightly adherent, and may be easily raised; but it soon acquires greater consistence, and cannot be detached without producing a certain degree of pain. The skin beneath is red and irritable, and the follicular ducts, examined with a lens, appear dilated, and sometimes obstructed, by the thickened sebaceous matter. This crust is occasionally detached spontaneously, especially in summer, when the skin is moistened with a free and copious perspiration. In other instances it remains firmly adherent for months; particularly when it appears on the nose. After a certain period the incrustations become black, and present a very singular appearance, which may explain the mistakes that have been committed with regard to the nature of this affection.

The follicular inflammation rarely ever extends to the cutaneous tissue. Even in its most severe form, we never find any of these

elementary lesions already described. However, it may become so intense as to alter the appearance of the sebaceous matter to that of the sero-purulent fluid of eczema. We have seen, in Biett's wards, several patients with these incrustations on the forehead, having a very close resemblance to those of eczema impetiginodes. The skin presents the same appearance as it does in simple inflammation of the follicles.

The duration of this disease is very variable ; we have occasionally observed it decline in the course of a few weeks, and we have also seen it continue for years. It occurs most frequently during the periods of adolescence and puberty ; never in infancy or old age. Persons of a sanguineous or lymphatic temperament appear to be more predisposed to it than others; or, at least, it is never seen except in persons of a fine, delicate, white, unctuous skin. It frequently appears in young women immediately after child-bed. Biett had a patient under his care for a considerable time, a country-woman, aged 28, in whom the follicles of the entire skin were inflamed. The eruption terminated in thick permanent incrustations. This patient was suffering at the same time from general articular rheumatism.

In some cases, certain conditions of the atmosphere may contribute towards the development of follicular inflammation. Thus, for example, Biett relates the case of a merchant of Nantes, a patient of his own, whose face became rapidly inflamed after exposure to a sharp north wind for several hours. The face was tense and swollen for two days ; the skin then became bathed with an abundant oily secretion, which was soon changed into thick brownish adherent crusts, covering the whole of the upper part of the face like a mask. How far this variety is influenced by food is not yet ascertained.

Diagnosis.—The diagnosis of acne is rarely difficult. The pustules of ecthyma, and the tubercles of syphilis, have been sometimes confounded with this eruption ; but the pustules of acne are small, slowly developed, and are seated on a hard base, whilst those of ecthyma are large, superficial, never accompanied with chronic indurations, and terminate in thick elevated scabs. The peculiar appearance of the syphilitic pustules, which are

surrounded by a copper-coloured areola, and the broad, flat, and shining tubercles, deeply tinted with the same colour, will suffice to distinguish syphilis from acne, in addition to which we have the usual accompanying symptoms of syphilis. Besides, the syphilitic tubercles are invariably ulcerated at the summit, especially about the alæ of the nose and the commissures of the lips; and, moreover, the pharynx and soft palate generally present additional unequivocal symptoms. The cicatrices of acne indurata are oblong, whilst those of syphilis are small, round, and depressed. The former are also covered with swollen follicles, and the skin around them has an oily appearance.

During the early stage of lupus, when a few scattered tubercles only appear on the cheeks and nose, there may be some difficulty in distinguishing that disease from acne; but pustules never appear in the former disease, which invariably commences with tubercles. They are never surrounded with that erythematic hue which always accompanies acne when confined to those parts. They are larger, flattened, and of a rosy red colour, and are followed and accompanied with desquamation, and a certain degree of puffiness of the subcutaneous cellular tissue.

Acne sebacea has sometimes been confounded with *noli me tangere* by careless observers, and cauterization and excision have even been proposed for its cure. We have seen two cases in which the patients were in the greatest alarm from this serious error, and the disease terminated favourably, in the course of a few weeks, with the simplest remedies. When the inflamed follicles are numerous and diffused over a large surface, and the sebaceous incrustations are at the same time firm, thick, and rugged, in the form of imbricated scales, the disease may be confounded with some forms of ichthyosis; however, this mistake can easily be avoided by bearing in mind that the scales of the latter disease are deeply implanted by one of their edges in the skin, that they are dry and very adherent, and cannot be detached without being torn, which is never the case with the incrustations of acne. It is necessary to recollect these distinctions, as mistakes of this kind have occurred more than once.

Prognosis.—The prognosis will vary according to the variety of the disease present. Acne simplex, for example, is a mild affection,

and never continues long. It generally disappears as the period of manhood approaches. Acne indurata is much more troublesome, especially when the eruption is diffused and intense. It often resists every method of treatment. Finally, acne rosacea is very rebellious, and is often incurable. The prognosis should be further guided by the length of time the eruption has existed, and by the age and constitution of the patient.

Treatment.—The treatment of acne varies, not only according to the variety of the eruption that exists, but according to the constitution of the patient and the causes and duration of the disease.

Acne simplex requires scarcely any treatment when the pustules are few; but, if the eruption is extensive, both local and general measures will be required. The diet should be restricted. The patient should abstain from wine, spirits, and coffee; and take in their stead milk, or an infusion of chicory.* If the patient is young and vigorous, bleeding may be necessary, especially when the disease affects young females at the first appearance of the menses; and even then it will be useful to promote this discharge by local baths, the application of leeches to the upper and inner part of each thigh, or by directing warm vapour to the external organs of generation. Emollient applications, as an emulsion of bitter almonds, a decoction of bran or of quince seeds, and tepid milk, will be found very serviceable. When the chronic indurations remain after this treatment, they must be combated by other measures, which will be noticed in the following paragraph.

Acne indurata sometimes requires both local and general bleeding, even if the patient is not strong or vigorous; and at the same time the diet should be restricted, and refreshing drinks prescribed. Active measures are now required to hasten the resolution of the tubercles, and to convert the eruption from a chronic into an acute form. Lotions containing distilled rose-water, with a little sage and lavender, and alcohol in the proportion of a third, a fourth, and even a half, according to the state of the eruption, may also be employed with advantage. Five or six grains of corrosive sublimate

[* If the root of the common succory is cut into small pieces, dried, and roasted, it resembles coffee, and is sometimes a good substitute for it. It allays heat and irritation.—B.]

in half a pint of distilled water, with an ounce of rectified spirit, forms another useful lotion in this variety of acne. Gowland's lotion, which is nearly the same as this remedy, with the exception of an emulsion of bitter almonds, which the former contains, is also very serviceable.

Friction on the pustules and indurated parts with an ointment composed of from a scruple to a drachm of the proto-chloride of mercury to an ounce of lard, is also frequently attended with success. But by far the best remedy to promote the resolution of the induration is the iodide of sulphur, in the proportion of fifteen to twenty-four grains to an ounce of lard. We have seen this remedy attended with the greatest success in Biett's wards, and have had severe cases of *acne indurata* under our own care, in which frictions with the iodide of sulphur had the most surprising effect in dispelling the tumours. Baths, and especially the vapour douche, applied to the face for ten or twelve minutes, are useful adjuvants, and if administered judiciously, will obviate the necessity of having recourse to cauterization, either with the nitrate of silver or with hydrochloric acid. Moreover, it is very difficult to confine the application of the caustic to the exact spot for which it is intended; and if it penetrates too deeply, it will produce painful ulcerations, and often deep cicatrices.

When the eruption is confined within a narrow compass, the successive application of blisters may be advantageously had recourse to, with the view of altering the vitality of the skin. We have seen at the Hospital of St. Louis this method attended with the greatest success. If new eruptions supervene during the treatment, and if there is great tendency to cerebral congestion, repeated bleedings and aperients should be prescribed according to circumstances. The latter ought to be suspended when there is much inflammation, when the indurations are painful, and the pustules numerous. On the other hand, they should be continued when the tubercles are hard, indolent, and of large size.

Drastic purgatives should be carefully avoided, as being not only useless, but frequently injurious. Mild laxatives may, in some cases, assist the operation of the other remedies, especially when the patient is strong, the intestinal canal healthy, and when there is a decided tendency of blood to the head. Sulphureous waters,

administered both internally and externally, are often very useful. They do not seem to produce much beneficial effect when mixed in the baths. Simple baths, at a temperature of 88 or 90 Fahr. are more effectual. The patient should take two or three every week. The cold sulphur douche has been employed with success by Biett, when the eruption disappears, especially if it was accompanied with the small black points before mentioned.

Acne rosacea requires a somewhat different plan of treatment from that of the other varieties. In this case the bleeding should be local, and not general, in the majority of instances. As, for example, leeches ought to be applied in the neighbourhood of the disease, behind the ears, to the alæ of the nose, &c.; but when females are affected at the first menstrual period, the abstraction of blood will be attended with benefit. This variety is very rebellious, and the topical applications, so useful in acne indurata, are almost useless; they even become injurious in this form of the disease. The treatment of acne rosacea consists for the most part in hygienic measures. The patient should avoid excesses of every kind; he should lead a sober and regular life, and live on light food, fresh vegetables, succulent fruit, &c. He should also avoid fatiguing exercise, both of mind and body, mental excitement, and remaining long in heated apartments. Immersion of the limbs in warm water, containing two ounces of nitro-muriatic acid to eight or ten quarts of water, is a useful auxiliary. When the tubercles are indolent, the vapour-bath should be applied to the face, and at the same time gentle friction or discutient lotions may be employed.

Acne sebacea can easily be overcome when the eruption is limited. Biett has often seen follicular inflammation give way in a very few weeks to the vapour douche, applied for fifteen or twenty minutes each time to the diseased parts. The incrustations speedily soften, and are easily detached. Those which reappear are in general thinner, less firm, and often fall off spontaneously. Narcotic lotions, rendered styptic after a short time by the addition of alum or of some vegetable acid, will contribute to hasten the cure.

[Acne is a mixed disease, depending partly on local peculiarity in the original formation of the skin—hence its supposed hereditary nature—and partly on functional disturbance; therefore an exclu-

sively local treatment would be as unavailing as empirical. And to confine ourselves to constitutional remedies solely, without endeavouring by topical measures to modify the tendency of the parts to take on this form of disease would be equally erroneous. Laxatives and alkalies, strict attention to diet, and the free use of the warm bath, or of the vapour bath, should be employed at the commencement of the treatment. In obstinate cases I have found the following mixture produce good effects.

℞ Bichloride of mercury, gr. ij.
Iodide of potassium, ʒ ij.
Distilled water, ℥ iij.

A dessert spoonful to be taken three times a day. And at the same time the following lotion, which was first recommended to me by Dr. Hastings:—

℞ Bicyanuret of mercury, gr. ij.
Distilled water, ℥ j.

This lotion should be painted over the parts with a camel-hair pencil, and wiped off in a few moments, when tepid water should be applied to subdue the smarting. In females with menstrual derangement this lotion will be more suitable—

℞ Milk of almonds, ʒ ij.
Bichloride of mercury,
Hydrochlorate of ammonia, āā. gr. iss.

Make a lotion, to be applied morning and evening. In some cases I have found the iodide of mercury internally, in doses of the tenth of a grain, twice or three times a day, very effectual. In acne rosacea the phosphorus ointment, composed of

℞ Phosphorated ether, ʒ j.
Cerate, freed from water, ʒ v.

will be found serviceable.

When the redness of the skin begins to decline, M. Campardon recommends ointments of iodide of potassium, and of iodide of lead, and to the tubercles an ointment composed of

℞ Chloride of silver, gr. xij. or xv.
Prepared lard, ʒ ss.
White wax, ʒ ij.

which hastens their resolution in a remarkable manner. M. Cazenave has recently recommended in his clinical lectures ammoniacal lotions, the action of which, he says, is principally chemical, forming, with the fatty matter contained in the follicles, a soluble soap, with an ammoniacal base. The hydrochlorate, or the acetate of ammonia, will answer equally. The iodide of sulphur ointment is one of the most useful local remedies; and a lotion of biborate of soda, with glycerine, to parts where the hair grows, will also be found very efficacious. I have seen these remedies act well in a case of three years' standing. The patient was connected with the *Times* newspaper, and the heat and glare of the gas all night had aggravated the disease considerably. The eruption on the face became gradually extended, until in a few months the face and forehead were completely covered with a red eruption of an unsightly character; first appearing in blotches, then speedily extending over the whole surface. After a time it would partially die away, but the blotches soon reappeared as before, and became again diffused. This was frequently repeated. The patient here referred to was completely cured with the preparations of phosphorus, iodine, and sulphur, and a wash of the biborate of soda and glycerine. The creasote ointment is sometimes used in chronic cases of acne, but I have never seen much benefit derived from it. The repeated use of the warm bath, or the vapour bath occasionally, will materially assist the action of the remedies above mentioned. Indeed, baths cannot be too freely used in the treatment of this, and of the great majority of cutaneous diseases, although they are but seldom had recourse to in this country.—B.]

MENTAGRA, OR SYCOSIS.

SYN.—*Varus mentagra; Mentagra; Dartre pustuleuse;* Chin welk.

Mentagra is characterized by successive eruptions of small acuminated pustules, closely resembling those of acne, scattered upon the chin, and other parts occupied by the beard, the submaxillary region, and the lateral parts of the face. Mentagra is an essentially pustular affection. It has, however, been mistaken by Willan,

Bateman, and Plumbe, who supposed that tubercles were the elements of the disease, whilst they are merely consecutive, and do not exist in all cases; and, moreover, the eruption is pustular from its earliest appearance.

Symptoms.—Sycosis most frequently occurs in adults, sometimes in persons of advanced age. It is generally preceded for several months, or even for years, by minor eruptions, on the upper lip, on the chin, or submaxillary region, which quickly disappear. The pustules shrink, and are speedily replaced by thin scabs, which dry and fall off in a few days. At a more advanced period, the eruption becomes more abundant, and then it first attracts the patient's attention. It often appears immediately after a debauch.

The pustular eruption is generally preceded by redness, heat, and a painful degree of tension about the chin. Small red points soon make their appearance, which become pustular between the first and third days. The pustules are acuminated and usually distinct; but when they are numerous, and grouped together, the upper lip, and a great portion of the chin, are covered with small prominent tumours, containing a yellowish fluid, and traversed through the centre by a single hair. They remain in this condition for six or seven days, giving to the countenance a very peculiar appearance, and at length burst, and terminate in slightly-thickened brownish crusts; but there is never any exudation, as in impetigo. The scabs fall off imperceptibly, and the disease subsides altogether in the course of ten or fifteen days if a new eruption does not break out.

It usually appears in the form of successive partial eruptions. The skin becomes inflamed, either in isolated patches, or over an extended surface. When the eruption is general and extensive, the subcutaneous, cellular tissue, as well as the skin, is deeply inflamed. There is considerable heat and pain, and even the scabs are in some cases thickened and matted in the middle of the hair. The extent of the eruption is variable; it is sometimes confined to the upper lip, to one side of the chin, to the side of the face, or it may appear at once in all these regions. Frequently a number of pustules form, and disappear, and are replaced by others at different intervals. In these cases the skin is rough, the epidermis is elevated in the

form of small whitish exfoliations, in the centre of which new pustules are occasionally developed.

There is another rather peculiar variety of the complaint, which appears in old people, and in persons whose constitutions have been deteriorated by dissipation or disease, but who are apparently strong and healthy, characterised by chronic tubercular indurations of the skin. These tumours are of variable form and size. They are sometimes almost as large as a cherry. In other instances, even after the development of the eruption, the inflammation continues to increase in intensity, and pustules, scabs, scales, and tubercles, cover the lower part of the face, which is swollen and puffy. They appear on every part of the face where the hair grows, and pustules frequently form on those tubercular indurations; but Plumbe was not correct in saying that the latter contain pus. The cellular tissue is sometimes deeply involved, especially when the inflammation is intense.

When the disease has continued for some time, the bulbs of the hair generally become affected, and the beard often falls off to a considerable extent; but it generally reappears when the disease subsides, and soon resumes its original strength and colour. The indurations gradually disappear after the eruption has ceased. Thé parts which have been affected remain for a certain period of a reddish or violet colour, and slight epidemic exfoliation takes place also for some time. The duration of the disease is very variable. In some cases it resists every kind of treatment, and continues for an indefinite length of time. It is also very apt to reappear, particularly in persons fond of good living.

Causes.—Mentagra chiefly attacks young people of a sanguineous and bilious temperament, and those who have much beard. It generally appears during spring and autumn; and persons who are exposed to strong heat, as cooks, smiths, founders, &c., are particularly liable to be attacked. Women are rarely ever affected. The better classes, and persons of cleanly habits, are, however, also liable to it. This disease has been often attributed to the use of a dirty razor, but seemingly without much foundation. Nevertheless M. Foville has seen several of the inmates of the lunatic asylum at Rouen attacked successively with mentagra after being

shaven with the same razor. It is evident that the action of the razor will aggravate the irritation of the parts when once the eruption is formed.*

Diagnosis.—The differential diagnosis of mentagra is very important. Various eruptions appear on the chin which may be mistaken for it; as, for example, ecthyma, impetigo figurata, and syphilitic tubercles. In ecthyma the pustules are larger and the bases more inflamed than in mentagra. Ecthyma is never accompanied with the circumscribed indurations of the skin and cellular tissue; and its scabs are broader, thicker, and more adherent. The pustules of impetigo figurata are disposed in groups, and are but slightly prominent, whilst those of mentagra are distinct and acuminated. The pustules of impetigo burst about the third or fourth day, and give issue to a considerable quantity of fluid, which is promptly converted, by desiccation, into broad, thick, yellow scabs. Those of mentagra burst between the fifth and seventh days, and are succeeded by dark brown, dry, and thin crusts. Besides, the tubercular indurations of mentagra are never observed in impetigo.

These characters may be very difficult to recognise when the eruption is extensive, the inflammation severe, and the pustules more or less agglomerated. It will then be judicious to suspend our opinion until the disease is more advanced. Syphilitic pustules are distinguished from those of mentagra by the absence of heat, pain, and tension. They are but slightly elevated, situated on a copper-coloured or violet base, and are developed slowly, while the pustules of mentagra are acuminated, and rest on a bright red base; besides, syphilitic pustules rarely occur on the lower part of the face only, but commonly appear on the alæ of the nose, on the forehead, and at the commissures of the lips. Syphilitic tubercles, which appear only to affect the superficial

[* M. Gruby presented a memoir to the Academy of Sciences, Paris, on a new species of cryptogame, which occupies the roots of the beard, and forms a species of contagious mentagra. The disease generally occupies the chin, lips, or cheeks; the affected parts are covered with greyish and yellow scabs, formed by the epidermic cells, under which is the root of the hair, surrounded completely by a sheath of cryptogamia; the latter are not elevated above the surface of the epidermis. In this disease the plant is situate in, and never leaves the hair follicle. See FAVUS and RINGWORM.—B.]

layers of the cutis vera, differ from the chronic indurations of mentagra, which are conical, and deeply seated in the skin, by their shining and dull coppery colour; besides, there are always some local or constitutional symptoms present which will readily distinguish them. Sycosis can hardly be confounded with furuncles.

Prognosis.—Mentagra never terminates unfavourably; but the physician should always be guarded in giving an opinion as to when the disease will disappear, or else he will often be deceived. The more frequent and successive the eruption, the longer the duration of the complaint.

Treatment.—The first indication in the treatment of mentagra is to remove the causes which excite the disease; as, for instance, when it affects intemperate persons, or those who are exposed to strong heat, the patient should guard against these exciting causes. The razor should not be used for a certain time, as it increases the irritation, and the beard may be cut with a pair of scissors. When the inflammation is severe, the application of leeches behind the ears, or on the submaxillary region; and when the patient is vigorous, general bleeding, together with emollient fomentations, and poultices of potato flour or crumb of bread, cooling drinks, and attention to diet, are the most useful measures that can be adopted. The employment of local bleeding, and especially of emollients, should not be confined to cases strictly acute; these measures will often be of great service, even in chronic cases, with induration of the skin, when the inflammation is at all active. Laxatives, as the acetate of potass, calomel, sulphate of potass, of soda, and of magnesia, are beneficial when there is no gastro-intestinal irritation present. They should be continued for some time.

When the disease is of long standing, the tubercles large, and the cellular tissue involved, we must have recourse to friction with ointments of the ammoniacal protochloride of mercury, or of the binoxide or subsulphate of mercury. To these may be added with advantage the vapour bath or vapour douche. We have frequently seen cases at the Hospital of St. Louis, in which these remedies had the most happy effects in dispelling the tubercular indurations. If the eruption recommences suddenly, the friction

should be suspended for a short period if it is abundant; but if only a few pustules appear, it may be continued.

Cauterization with nitrate of silver, or the strong acids, is not a desirable remedial measure. It should never be employed unless in cases where the disease has assumed an inveterate chronic character. When all these remedies fail, we have often succeeded with tonics, the preparations of iron especially. Biett has administered the muriate of gold, in doses of a quarter of a grain each, rubbed into the tongue, with remarkable success. The mercurial preparations, and particularly Larry's syrup, have sometimes effected a perfect cure.

[The existence of vegetable growths in this, and several other cutaneous eruptions to be described presently, modifies materially the treatment of these diseases. The growth of hair on the diseased parts further complicates it. Sycosis is more of a local than a constitutional disease, and we must rely on local remedies principally to effect a cure. When once established, however, irregularity in living and a plethoric habit of body will aggravate the disease. Local bleeding is often necessary in the treatment of sycosis, but I have never found it necessary to resort to general bloodletting. Saline purgatives, a restricted diet, and emollient baths of bran, starch, or gelatine, are necessary at the commencement of severe cases. The beard should be cut with the razor-scissors. The razor, which is a constant exciting cause, should be laid aside. Devergie recommends cauterization with the nitrate of silver, and repeated employment of the vapour douche. The tannin ointment, the carbonate of lead, sulphur, and iodine ointments, and the iodide of mercury and iodide of sulphur ointments, are recommended in different stages and forms of the eruption. Puncturing the larger tubercular indurations with a lancet, provided they are not penetrated by hairs, is often useful. The vegetable growth referred to is seated exclusively in the hair follicle, and Dr. Jenner, who regards sycosis as a local disease, recommends sulphurous acid as the most effectual remedy for destroying the parasite: but I shall refer to this subject again in the chapter on Favus. I have found much benefit from alkaline lotions, with glycerine; the latter is very soothing to the parts, and protects them from the atmosphere. The

vapour douche is also very serviceable in many cases of chronic sycosis. Notwithstanding the local appearance of this disease, I have found the operation of the topical remedies greatly facilitated by the use of vegetable bitters, and mild tonics, at the same time.—B.]

PORRIGINOUS ERUPTIONS.

SYN.—*Porrigo Scutulata; Porrigo Favosa.* Ring-worm; *Favus.*

Willan and Bateman have confounded several cutaneous diseases of different kinds under the name of *porrigo*, from *porrum*, a leek, from a similarity of its smell, and thereby have added much to the difficulty of studying and distinguishing the various disorders to which the scalp is liable.* They have described six varieties: porrigo larvalis, porrigo furfurans, porrigo lupinosa, porrigo scutulata, porrigo decalvans, and porrigo favosa; some contagious and some not, under the title of porriginous eruptions. Four of these are impetiginous, or squamous affections. Their porrigo favosa is a variety of impetigo, and so is their porrigo larvalis. Their porrigo furfurans is, in some cases, a pityriasis capitis, and in other cases a chronic eczema, the thin scabs of which are formed by the drying up of a fluid which slowly exudes from the scalp; and their porrigo decalvans is a partial alopecia, which is often a sequel of different forms of disease. *Porrigo scutulata*, or ring-worm, and *porrigo favosa*, the porrigo lupinosa of Willan, are different from all the others, as Biett first pointed out, by the peculiarly-formed pustules of one of them, and their contagious nature. They are

[* In the Registrar-General's return for February 4, 1851, a boy, twenty-one days old, is said to have died of "pemphigus and debility," and another, eleven months old, of "porrigo and convulsions." Can anything be more vague or unsatisfactory than these statements, although, no doubt, they are the genuine returns of the medical men who attended the patients? To this vicious phraseology in medical nomenclature the proverbial obscurity in cutaneous pathology is in great measure to be ascribed. "Died of convulsions" is an erroneous return. It is the pathological condition, of which convulsions are but a *symptom*, that causes death. "Porrigo" is a term quite as mischievous as *dartre* or *scurvy*, inasmuch as almost every kind of eruption of the scalp has been so designated at one time or another, and even now the same convenient designation is in general use.—B.]

essentially fundamental diseases, and the whole of the porriginous eruptions of Willan may be reduced to these two.

The elementary lesions of one of these are favous pustules, which exclusively belong to it. They are small, perfectly rounded, and imbedded in the epidermis; they contain yellowish, straw-coloured matter, which soon concretes, presenting a depression at the centre, which may be detected in the nascent pustule by the aid of a magnifying glass. In the course of a few days this yellow matter is converted into thickish, cellular, slightly prominent scabs, which go on increasing for some time. They sometimes are pitted or umbilicated in the centre, and are often very hard, and of a greyish-yellow colour.

This disease is therefore distinguished from all others by an eruption of favous and contagious pustules, generally developed on the hairy scalp. Children are more subject to it than adults; but it often appears in full-grown persons, and is generally the result of some peculiar disordered condition of the economy. It is sometimes produced by uncleanliness, poverty, bad nourishment, and intense grief. It may also be propagated by contagion. The seat of the favous pustules has been alleged by many dermatologists to reside in the *corps reticulaire*. Duncan places it in the bulbs of the hair, in consequence of the latter being so easily removed when the pustules are new. Still it is evident that the bulb is only secondarily affected; and the true seat of the favous pustules appears to be at the extremity of the piliferous duct. We shall now describe these two varieties individually.*

[In the second of this group,—porrigo scutulata, or common ringworm,—the pustules, when they do exist, are accidental, and alto-

[* The porrigos are very common affections in the lower animals. A form of crusta lactea, which is not porrigo, similar to that observed in the human subject, attacks calves and lambs, and is included amongst those eruptions. Porrigo of the feet is similar, if not identical, to the "grease" of veterinary writers, and the "mauke" and "eaux aux jambes" of the German and French authors; but so many diseases have been described and confounded under this term, that it is not easily individualized. It corresponds to the impetigo sparsa of man more than to any other disease. Haubener and Greve describe a disease under the name of "porrigo decalvans equorum," similar to that which occurs in man. Vide *Recherches de Pathologie Comparée*, par C. F. Heusinger.—B.]

gether secondary products. This disease is, in my opinion, the result of vitiated nutrition in the organs which secrete the hair, analogous to scrofulous degenerations which occur in other structures of the body. Both porrigo favosa and porrigo scutulata are characterized by the presence of vegetable fungi; but the exact relation of these parasites to the diseases they accompany is not yet clearly ascertained. Some writers consider the vegetable growth to be the element of the disease; others, with whom I coincide, that it is merely an epiphenomenon.

The diseases of the skin in which vegetable parasites have been shown to be constantly present, are porrigo favosa, porrigo scutulata, porrigo decalvans, sycosis, and pityriasis versicolor. In four of these diseases the vegetable growth is connected with the hair. The plants, and the situations they occupy, are different in all. Dr. Jenner, who has recently investigated this subject, says—In porrigo favosa the epiphyte takes its origin at the orifice of the hair follicle, and thence spreads downwards between the hair and its follicle, into the substance of the hair itself, and on to the surface of the cutis. In sycosis, the plant is situate in, and never leaves the hair follicle; in porrigo scutulata, supposing that disease to be the "herpes tonsurans" of Cazenave, the primary seat of the vegetable is the hair follicle; thence it spreads into the substance of the hair, and on to the surface of the cutis; in porrigo decalvans, it is the surface of the hair a short distance above the cutis whence the plant springs; while in pityriasis versicolor, the epiphyte spreads between the epithelium scales to which it is attached.

Dr. Jenner, who believes that the treatment of these diseases consists in the destruction of the parasite, recommends for that purpose sulphurous acid as the most effectual remedy.—B.]

PORRIGO FAVOSA.

Syn.—*Tinea; Favus; Porrigo lupinosa; Tinea favosa; Tinea rugosa.*

This is the most frequent variety, and is characterized by an eruption of very small, flat, deep-seated umbilicated pustules, which soon concrete, and form bright yellow and very adherent

scabs, which retain the umbilicated appearance of the pustules. The scabs gradually increase, always preserving the depression in the centre, unless they co-exist with other incrustations, when the disease is not so easily detected, and they are highly contagious.

The hairy scalp is the special seat of this affection, but it may appear on the forehead, the temples, the chin, and eyebrows. It generally begins on the scalp, and spreads thence to the other mentioned parts. We have frequently seen it, at the Hospital of St. Louis, on the shoulders, on the scapulæ, on the elbows, fore-arm, and on the knees, the upper part of the legs, thighs, and on the scrotum. It sometimes appears on the back and abdomen, and on the hands, in which latter instance it is generally the result of contagion.

Symptoms.—Porrigo favosa commences with an eruption of extremely small yellow pustules, hardly perceptible the first day, and resembling small yellow points; they are always on a level with the skin, and seem to be imbedded in the epidermis. They are scarcely formed when the yellowish fluid begins to concrete, and a slight depression appears in the centre, which gradually increases, and is very distinct about the fifth or sixth day. The pustules are generally distinct at the beginning; sometimes, however, they are clustered together, and become confluent, forming a continuous scabby surface of some extent. Their appearance is always accompanied with smart itching. When distinct, they are usually seated on an elevated and slightly-inflamed base, and each pustule is generally traversed by a single hair. The scabs slowly increase, preserving their circular form and depression in the centre, which becomes gradually more marked; they thus reach the extent of several lines, and Biett has seen them more than an inch in diameter.

When the pustules are set close together, they often unite, and form large incrustations on the surface; and the honeycomb depressions corresponding to the primitive pustules are easily distinguished. Sometimes the whole head is covered with a kind of scabby cap; again, some detached pustules appear here and there, terminating in slight desquamation. If the scabs are removed by poultices at this period, slight erosions are seen beneath, which do not become covered with new crusts; for the formation of these,

new pustules are required. When the disease is left to itself, the scabs continue for months and years; they become thick, whitish, and brittle, and split in various directions. It often happens, that while they are thus disappearing from one part, new pustules are forming in other places, which pursue the same course. When the scabs are much prolonged, the skin and the tissues beneath assume a severe chronic form of inflammation, which sometimes extends to the periosteum, and even to the bone. The hair of the affected parts may be easily pulled out by the roots from the commencement of the disease. If it is, however, of long standing, the hair falls off spontaneously, and leaves behind bald, smooth, shining patches. When the hair grows again, it is generally thin, woolly, weaker, and of a lighter colour than the original.

This affection is never accompanied by febrile symptoms, but a troublesome and annoying itching is often present during its progress, which is aggravated by want of cleanliness. A number of lice is often seen under the scabs, causing the patients to scratch themselves, and by this means increase the inflammation. In these cases there is a strong, disagreeable odour, similar to that of cat's urine, given off from the head. When the scalp is purged of these lice and scabs, the odour emitted is sickening. The excoriations on the skin, which often extend to the hair follicles, and so produce baldness, are not covered by the regular cup-shaped favous pustules, but a red and fœtid sanies oozes out, which concretes into irregularly-shaped scabs. Fresh pustules, however, soon appear, which form fresh favous scabs. Small subcutaneous abscesses may sometimes appear, accompanied with sympathetic engorgement of the lymphatic glands of the neck. It is rarely complicated with internal organic disease. It has been remarked that the growth of those persons who have been affected with porrigo is often arrested, and the development of the mental as well as of the physical powers is slow and imperfect. The duration of the disease is very variable and uncertain; and the hair, when reproduced, is rarely the same as the original, either in colour or consistence.

Causes.—Porrigo is an essentially contagious disease. In some instances, however, it is impossible to transmit it by contagion. Individuals of a soft, lymphatic, and scrofulous constitution are eminently predisposed to it, although it sometimes occurs in healthy

and vigorous subjects. The other exciting causes have been described in the general observations at the head of this chapter.

[*Causes and Nature of Favus.*—Favus is essentially a disease of misery, of deterioration of the *vis vitæ*, however induced. It never originates in healthy or robust individuals, but, like glanders in the horse, when once developed in subjects of a scrofulous diathesis, or of a feeble or broken-down constitution from neglect, bad feeding, and general privation, it may readily be transmitted to the strong and the healthy. With regard to the elementary nature of this disease, various theories have been formed and published on the subject, some of them plausible enough, but the true pathology of favus remains still a disputed question. That it is not pustular is evident, for at no period of the disease does the peculiar yellow secretion present either the physical or chemical characters of genuine pus. It is stated by Mahon to be a morbid secretion of the sebaceous glands. Mr. Erichsen and Dr. J. H. Bennett allege that it is a tubercular disease, its element being a modification of tubercle, as seen in the lungs and other organs, and more recently its vegetable nature is considered by many microscopical observers to be fully established. The latter theory has been advanced by Remak and Schönlein, and supported by Fuchs, Hebra, and Gruby, on the continent, and in this country by Professor Hughes Bennett, of Edinburgh, so far as the existence of the parasite in the tuberculous mass is concerned.

The vegetable theory is this:—The peculiar favous crust, says Gruby, is composed of a capsule of epidermic scales, lined by a finely granular mass. From this mass millions of mycodermatous plants spring up and fructify, and the presence of these vegetations constitutes the pathognomonic character of the disease. In order to examine the development of these vegetations microscopically, it is necessary to make a thin section of the capsule completely through, embracing the outer layer of epidermis, amorphous mass, and light friable matter formed in the centre. It will then be found, on pressing this slightly between the glasses, and examining it with a magnifying power of 300 diameters, that the cylindrical tubes springing from the sides of the capsule proceed inwards, give off branches dichotomously, which in turn terminate in round or oval globules. These tubes are from $\frac{1}{400}$ to $\frac{1}{600}$ of a millimetre in thickness, jointed at

regular intervals, and often contain molecules varying from $\frac{1}{10000}$ to $\frac{1}{1000}$ of a millimetre in diameter. The longitudinal diameter of the sporules is generally from $\frac{1}{300}$ to $\frac{1}{100}$, and the transverse from $\frac{1}{300}$ to $\frac{1}{150}$ of a millimetre in diameter. Professor Bennett, in commenting on the foregoing statement, says that the amorphous mass, from which Gruby describes the mycodermata of tinea as springing, is of a finely granular texture, and identical in structure to certain forms of tubercle.

Admitting that the heterologous formation shed upon the sides of the follicle is a modification of tubercle, it by no means follows that the vegetations found in this substance are the cause of favus, and the origin of this formation. For my own part, I have no hesitation in saying that the mycodermata are merely *secondary* products developed on an appropriate soil, which the amorphous mass seems to be, and without which they would not be produced. Every species of parasite has a soil peculiar to itself, and necessary for its existence. So the amorphous yellow product of favus, whether secreted in the sebiferous glands or in the follicles on the sides of which it is shed, is the soil peculiar and indispensable for the vegetation of the fungous growth or mycodermis alleged to be the origin of that disease. It appears to me that the vegetable parasite of favus, and the animal parasite of scabies, stand in the same relation to their associated diseases as regards cause and effect—that both one and the other are epiphenomena, and not the essential causes of the morbid conditions with which they are related. In a word, favus is the result of some peculiar cachectic or disordered condition of the system, especially affecting the hair follicles, bulbs, and sebiferous glands, vitiating the functions of these organs, and producing that peculiar degeneration in which the vegetable fungi grow and flourish.

Porrigo favosa is described as a pustular disease, and pustules are often found on the scalp affected with it. But, as Dr. Jenner observes, porrigo favosa has no necessary connexion with pustules, as we see when the disease affects the skin of the trunk or extremities: here each crust can be traced from its commencement to its full development, and from first to last not a pus corpuscle is to be detected in its crusts. Mr. Wilson says the cells or corpuscles of favus possess a striking resemblance to pus cells, and, excepting

their form, are closely allied to young epidermal cells, so that it would require no stretch of imagination to suppose the epidermal cell, altered in its action by disease, capable of assuming the character of the pus cell; or the latter, from a similar cause, passing into the likeness of a favus cell. This view, however, is not adopted by microscopical observers. Mr. Wilson also denies the vegetable nature of the bodies, so constantly present in ring-worm and favus.—B.]

Diagnosis.—The peculiar appearance of the pustules and incrustations of porrigo favosa will prevent it from being confounded with any other pustular eruption of the scalp. When the scabs are in abundance, they are of a yellowish white colour, dry, and sometimes crumble into powder. The disease then resembles impetigo granulata; but there are always some favous pustules present, which will clear up the diagnosis, and the hair invariably falls off in the former affection, a circumstance which never occurs in impetigo granulata. It has been mistaken for other diseases, and we have seen it, when extensively diffused, confounded even with lepra; but the most superficial acquaintance with the characters of favus would have prevented any mistake of this kind.

Prognosis.—The prognosis of this affection is only unfavourable with regard to its duration, which is often prolonged for a considerable period by the development of new eruptions as soon as the original have disappeared, and the baldness which it causes.

Treatment.—The treatment of porrigo favosa is altogether local, although in some cases it may be necessary to recruit the patient's strength with bitters, tonics, &c., and to administer a few mild laxatives.

The first step to be taken is to cleanse the scalp thoroughly, to clip the hairs close with a pair of scissors, or to shave them off, and to remove the incrustations by the frequent application of tepid emollient fomentations, which may be alternated with soap washes. These measures, simple as they may appear, are highly efficacious in the treatment of favus, and many cures which have been attributed to other remedies, belong in reality to them. They are not alone, however, in general sufficient to remove the disease. Recourse must be had to more energetic measures, with the view of altering the condition or vitality of the skin from disease to health.

The presence of the hair does not seem to be so injurious as some writers allege, nor is the disease arrested as soon as it is removed; on the contrary, the scabs continue frequently for years on parts devoid of hair: neither is the removal of the hair from the diseased parts with a pair of small forceps so painful an operation as some people suppose; for the skin about the roots is soft and tumid, and the hair is easily detached. Alkaline preparations are very advantageous in these cases; they modify the condition of the skin as well as promote the removal of the hair.

In addition to the foregoing remedies, alkaline and sulphur ointments, and acidulated lotions, will be found to be the most effectual measures that we can employ in porrigo favosa. The alkaline preparation should vary according to the circumstances of the case; for example, when it is desirable to remove the hair at once, and at the same time to stimulate the scalp, the subcarbonate of potass or soda in the proportion of one or two drachms to an ounce of lard should be rubbed over the diseased parts for five or ten minutes every day. Alkaline lotions in the proportion of two drachms of the alkali to a pint of water may be used at the same time. After a certain period the hair will begin to fall off. Before having recourse to these remedies the hair should be cut, the incrustations removed as much as possible, and the scalp cleansed in the manner already directed.

We have often employed the sulphuret of potass, in the proportion of one or two drachms to a pint of distilled water, at the Hospital of St. Louis, with much advantage, and also Barlow's lotion. The chloride of lime has been frequently used with success in these cases. Mild sulphur douches, repeated every day, will fulfil the object in view still better. Great patience is necessary during the treatment, and care should be taken that these measures are followed out exactly. Dilute nitric and muriatic acids have in some cases been employed with success, but these may be advantageously replaced by a lotion composed of one drachm of dilute sulphuric acid to a pint of distilled water.

Solutions of sulphate of zinc, of copper, of the nitrate of silver, or of the bichloride of mercury, have been sometimes used with much benefit, to which may be added two or three ounces of alcohol to a pint of water. Ointments composed of two drachms of sublimed sulphur, with the same quantity of white soap, to an ounce of lard,

and of calomel, or the oxide of manganese in the same proportions, have been often recommended. But amongst all other remedies, the iodide of sulphur ointment, first employed by Biett in the treatment of porrigo favosa, merits our greatest confidence. We have seen it in the course of a few weeks alter the condition of the skin in old cases, prevent the formation of new pustules, and cause the hair to be reproduced with its original characters and appearance. The ointment should be rubbed gently over the parts affected every night and morning. During the use of all these remedies, the scabs should be removed as soon as they form by the continued use of emollient and alkaline lotions. Baths are always useful in these cases, especially when the disease appears upon the trunk or limbs. Sulphur baths are very efficacious in some instances. The utmost cleanliness should be observed all along, and the fluid which exudes from the excoriations should not, if possible, be allowed to touch the sound skin.

In obstinate cases cauterization with the nitrate of silver or some diluted acid has been attended with success. After the scabs are removed, and the scalp well washed, the acid should be passed quickly over the surface with a feather, and water poured immediately on the parts to prevent the action of the caustic extending too deeply. In the treatment of porrigo favosa we must bear in mind that no single remedy will always be successful, and that great perseverance is needed on the part of patient and physician. Cleanliness must be rigidly observed in all cases.

[Professor Hebra, of Vienna, who regards this disease as a vegetable parasite, says, the main indications in the treatment are the destruction of the plant and the prevention of its reproduction. With this view he orders the hair to be cut close, and after the favous crusts are softened by a sufficient quantity of oil, the head should be enveloped in warm fomentations composed of a melange of soap and bran, which are to be continued until the incrustations covering the scalp begin to swell and detach themselves from their base. After removing the softened crusts with a spatula, the brush and comb should be used, and the scalp examined carefully, which will be found very red, bleeding easily, and the seat of several excoriations, so as to ascertain if there is still any favous matter remaining; for it is necessary to remove the scabs of the disease from the

epidermic cells and hair follicles, in order to prevent their reproduction. To attain both these objects, M. Hebra strongly recommends lotions of the bichloride of mercury, of the nitrate of silver, or of arsenic, and the ointment of the iodide of lead, as very efficacious remedies. He also sometimes employs ointments of the cocculus indicus, of quick lime, of the carbonate of potass, the citrine ointment, and the dilute mineral acids. He has then succeeded more rapidly in completing the cure by the following method than by any other. The favous matter being removed from the scalp, the dilute acetic acid should be rubbed over the morbid parts until they bleed slightly. When this occurs the acid is to be omitted, and an alcoholic solution of iodine applied in its stead, and continued for several weeks until the parasite ceases to be reproduced. Before having recourse to these applications, the hairs ought to be removed by the roots with a pair of pincers, which is easily done, as they are but slightly attached, for frequently the germs of the disease remain in the bulbs of the hair. Such are the views of the nature and treatment of favus entertained by M. Hebra, the distinguished professor at Vienna, and one of the most enlightened dermatologists of the day. As already stated, Dr. Jenner has found the sulphurous acid the most effectual remedy for destroying the parasite.—B.]

RINGWORM.

*Porrigo scutulata.**

[It is singular that ringworm, which is one of the most common diseases of the scalp in this country, is an exceedingly rare affection in France, and that favus (porrigo favosa) so common in the French hospitals, is seldom seen in England. To this circumstance I attribute the error which M. Cazenave has lately fallen into, in classing it among the vesicular eruptions; for, most assuredly, it is not vesicular, and if vesicles have been observed in the vicinity of the disease, they were merely accidental. M. Cazenave has given it the name of "herpes tonsurans," because the diseased patches resemble the form of the tonsure.

[* As the original article on this subject is a description of a variety of *porrigo favosa*, I have substituted the following chapter, which contains the history of the disease known as "Ringworm" in England, embracing the modern pathology and treatment of that complaint.—B.]

Symptoms.—Ringworm (porrigo scutulata of Willan) is a chronic contagious disease of the scalp. It is the result of a peculiar morbid condition of the hair follicles, in which the related bulbs are partially involved, and the texture of the hair of the affected part extensively altered—in a word, it is the result of a vitiated or abnormal nutrition in the organs which secrete the hair, analogous to scrofulous degenerations which occur in other structures of the body. The seat of the disease is not in the hair, but in the organs which secrete it, and the vegetable production so minutely described by Gruby, of the existence of which there can be no doubt, is a *secondary* product, and not the disease itself. Gruby attributes the highly contagious nature of the eruption to the existence of the parasitic growth referred to.

We have seldom an opportunity of seeing ringworm in its early stage; for the patient even is not aware of its presence for some time after its development, and the first indication is a trifling degree of itching on the parts, which is relieved by the dislodgment of a thin scurf in the act of scratching, and it is this circumstance which first directs attention to the disease. If examined at this period there will be found neither heat, redness, nor moisture on the morbid surface; but a thin layer of furfuraceous or scurfy matter of an oval or circular form, surrounding the hairs either singly or in small groups. These circular patches are always few in number and limited in extent; frequently there is only a single diseased spot to be found on the head, and if this is observed early it will be found to extend, from a small point or nucleus, by its periphery, until it attains a certain size of limited circumference, when it ceases to extend, and within these limits the disease passes through its various phases.

The skin is dry, uneven, and covered with rough eminences, sensible to the eye and to the touch, which give it the appearance of the prickly condition of skin called "cutis anserina." These mamillary projections are enlarged, and diseased hair follicles propelled by the hair in its growth from beneath the level of the skin; and if we endeavour to pull the hair, it will not be detached from the root, but break on a level with, or a short distance from, the mouth of the follicle. The hairs that grow on the morbid surface, after it has arrived at the condition described, do not attain any

length, but break spontaneously at a short distance from the skin, leaving an exposed patch of the scalp, which always maintains its circular or disc-like form. The ends of the broken hairs are jagged, discoloured, twisted, and not unlike the filaments of flax or tow.

If the disease has not been arrested at this stage, the furfuraceous scaly matter will become agglomerated, and form dry, thick, dirty, yellow-looking scabs or incrustations, thicker at the circumference than towards the centre. It is the irritation produced by these scabs, but more particularly by the action of the nails in scratching or trying to dislodge them, that produces the pustules, and subsequently the discharge of their contents around the original disease, which deceived Willan, and induced him to place ringworm amongst the pustular eruptions of the scalp. He mistook an accidental, or superinduced lesion, for the element of the disease, which is totally different.

Causes.—This disease is evidently the result of abnormal nutrition of the parts, however induced, occurring most commonly in scrofulous, ill-fed, and neglected children, from whom it may be transmitted by contagion to the most healthy and vigorous, but it never originates in the latter. Gruby asserts that the scurfy powder which under the microscope is seen to be a vegetable parasite, is the medium by which ring-worm is transmitted from one patient to another. On examining attentively with the microscope, says M. Gruby, this greyish-white powder, which is seen on the morbid surface, you will be surprised to find that it is composed of a number of cryptogamia. On submitting the hairs which grow on this surface to the same method of examination, we shall observe a great quantity of these cryptogames, embracing the cylinder of the hair on all sides, and forming round it a perfect vegetable sheath, which accompanies the hair for a short distance after its exit from the follicle. The structure of the hair becomes less transparent; the fibrous portion is interspersed with extremely minute granular molecules, which separate the fibres from each other in part or wholly, the size of which is estimated at $\frac{1}{5000}$ part of an inch in diameter; and the shaft of the hair is distinctly enlarged or hypertrophied.

The cryptogame surrounding the hairs at their bases, by contact with the adjoining hairs, involves them in the same morbid con-

dition; altering the texture gradually until they break off short, and thus expose a circular patch of partial baldness. These vegetable parasites are produced with surprising rapidity. On issuing from the follicle the hairs become grayish for a certain distance, and in eight days break at the line where the cryptogame surrounds them. The hairs which are most enlarged resist for a longer period, and according as they rise above the level of the skin, they are attacked by the parasitic fungus. They are often surrounded at their base by a quantity of cryptogamia sufficient to form a small grayish elevation. It is these accumulations which have been mistaken for pustules, vesicles, and the secretion of the sebaceous follicles. Such is M. Gruby's theory of the nature and causes of ringworm. So far as the existence of the vegetable parasite is concerned, I agree with him; for any student can satisfy himself on this point by the aid of a microscope of moderate power. But that the cryptogame is the origin of the disease, I by no means admit. It is altogether a secondary or adventitious product, as the acarus in scabies and the mycodermis in favus.

Diagnosis.—The diagnosis of ringworm is not difficult. The peculiar tonsure-looking discs—the mealy or furfuraceous secretion—the dry, uneven state of the skin—the rough sensation it gives to the touch from its elongated follicles—the broken, scattered, and ragged hairs which occupy the diseased patch, which is only partially bald; and in severe cases the dry, hard, fissured, and dirty-looking incrustations—will distinguish this from all other eruptions of the head.* These parasites have an important bearing on the diagnosis of the diseases to which they belong. They are, as Dr. Jenner remarks, so small, the genera and species are so well defined and so easily distinguished, so constant in their presence, and so absolutely limited to particular affections, that the smallest particle of what is commonly called the diseased secretion—a particle so small as to require a lens for its detection, is amply sufficient to enable the practitioner to make most positively the diagnosis, form a

[* Mr. Dendy informs me that during his attendance at the Royal Infirmary for Children, for a series of years, he never met with a case of herpes of the scalp, nor does he believe that any form of herpes occurs in that region as an idiopathic disease. If the vesicles of herpes are ever seen there, they are secondary and accidental.—B.]

prognosis, and determine the treatment. From the twentieth of a grain of the crust of porrigo favosa, the disease could be diagnosed with the most absolute certainty, without the patient being seen by the physician.

Treatment.—As this disease is highly contagious, the patient should be separated from his companions as soon as its existence is clearly ascertained. It generally occurs between the ages of seven and fourteen years, seldom after that period, and attacks by preference lymphatic or scrofulous children, or those who have been ill-fed and neglected in early childhood. Before having recourse to any local treatment, farther than washing the parts occasionally, and otherwise attending to cleanliness, the tone of the system, which is in general below par, should be invigorated by a course of ferruginous tonics and vegetable bitters, or the mineral acids, and a nutritious, but unstimulating diet. The citrate of iron in the infusion of gentian will be found the most appropriate, and at the same time the most efficacious tonic for the class of patients who are attacked by ringworm. The iodide of potass may occasionally be substituted for the preparation of iron for a few days with advantage, especially if the latter has been administered for any length of time.

The object of the local treatment is to endeavour to alter the vitality of the parts by stimulating applications, so as to induce the hair follicles and bulbs to take on a more healthy action. A variety of remedies have been recommended for this purpose—ointments *ad libitum*, and lotions without number. Of the former, calomel, the carbonate of potass, borate of soda, red oxide of mercury in the proportion of a scruple to an ounce or half an ounce of lard, and the dilute nitrate of mercury ointment, which seems to be a universal remedy for skin affections, have each in their turn been much recommended; but here, as in most other eruptions of the head, greasy applications may be dispensed with to the advantage of the patient and the credit of the physician.

M. Cazenave recommends an ointment composed of one part of pitch to two of citron ointment, and another composed of a scruple of tannin to an ounce of lard, as the best unguents for this disease. Lotions of the borate of soda, carbonate of ammonia,

carbonate and bicarbonate of potass, are preferable; but the lotion of the bicyanuret of mercury, in the proportion of one to two grains to the ounce, according to the amount of stimulus required, will be found more serviceable than this, or even the solution of the bichloride of mercury, so commonly used in this eruption and in favus. Lint saturated with the lotion, when the bicyanuret is not selected, should be applied to the parts, and covered with oilskin to prevent it from evaporating, and the parts from drying. But when the bicyanuret of mercury is employed, it should be applied to the diseased surface with a camel-hair pencil, particularly when the skin is almost bare. The local remedy, however, which I have found the most effectual in the treatment of this obstinate complaint, is the vapour of cinnabar or sulphur conveyed directly to the morbid patch through a caoutchouc tube, from any simple apparatus for igniting the compound in, the patient lying in the horizontal position during the application of the vapour. It will stimulate the parts gently, if applied for twenty minutes, and the diseased surface, which was previously dry and pale, will appear slightly red, and bedewed with moisture.

The treatment of these diseases, Dr. Jenner observes, seems to throw some light on their pathology. The treatment which has the strongest evidence in its favour is that which has for its object to destroy the parasites. Various agents have been employed for this purpose; corrosive sublimate, acetate of copper. That which I have used is sulphurous acid. If the disease be accompanied by an acid secretion, then a salt of the acid, *e. g.*, sulphite of soda, may be applied; sulphurous acid being, under the condition referred to, set free. If there be no free acid present, then the sulphurous acid itself must be applied.—B.]

ALOPECIA.*

SYN.—*Porrigo decalvans;* Baldness.

Loss of Hair from Natural Causes, Debility, or Disease.†

ALTHOUGH Alopecia almost always presents the same external appearance, it may nevertheless be the result of very different anatomical and physiological conditions. For example, it may be caused by alteration, or even destruction, of the hair bulb; or it may occur without any alteration of the bulb whatever, as the result of lesion of the secretion destined for the formation of the hair; which secretion may even be completely suspended for a certain time; or, finally, it may arise from local inflammation, acting mechanically, so to speak, upon the scalp, and causing the hair to fall either temporarily or permanently, as we see occurring in several diseases of that region.

I propose to describe in the following pages, under the title of ALOPECIA, all the various modes in which *baldness* is occasioned, and to embrace every variety of this morbid condition under the two sub-heads:—

1. Alopecia from natural causes.
2. Alopecia from disease.

NATURAL ALOPECIA.

This variety includes congenital and senile baldness, both of which are characterized by an important feature, namely, structural alteration of the hair bulb. In the former, this alteration is primary; in the other, secondary. In both cases, it is a necessary and indispensable character. Alopecia, however, does not pursue the same course in each instance.

Congenital alopecia may be general, but this is a very rare

[* From αλωπηξ, a fox, because the fox is subject to a species of baldness, or shedding of the hair.]

[† The first section of this chapter is condensed from Cazenave's recent work, *Sur les Maladies du Cuir Chevelu.* I am responsible for the latter part.—B.]

occurrence, and it may be as well to bear in mind that it is not the result of total absence of the bulbs, for even when the scalp is completely and primarily destitute of hair, there may always be found here and there over the cranial envelope, a sort of thin, weak down, which at least proves the existence, and to a certain extent, the action, of the hair follicles. This variety may be stated to consist in a peculiar abnormal condition of the bulb, with lesion or insufficiency of the secretion from which the hair is formed. Congenital alopecia is generally partial.* It is not an uncommon occurrence to observe small circumscribed patches in different parts of the scalp, where there never had been hair, and never will. These patches are smooth and shining, but do not present the peculiar smooth and milky appearance of vitiligo, nor the cicatrized aspect of the baldness resulting from porrigo favosa.

Senile baldness is of such frequent occurrence at a certain age, that, as regards men particularly, it seems to be a normal or natural condition, to which the occasional cases of persistence of the hair in old age are merely exceptions. If we were to be guided by its name, this variety of baldness should never appear before the fiftieth year at least; but many circumstances, as for example, want of sleep, grief, long continued and laborious mental occupation, may materially hasten its appearance, and we frequently see young men under twenty-five years of age, who had previously had an abundant head of hair, become completely bald from one or other of the causes referred to.

Senile alopecia usually commences on the top of the head, where the hair forms a kind of central point called the *vertex*. It extends thence in a forward direction, giving to the forehead an appearance

[* *Complete Baldness in a Boy eight years old.*—A young gentleman, eight years old, was brought to me on the 4th Feb., 1854, by his parents, with a shining scalp, as seen in old men, without a vestige of hair on it, denuded of eyebrows and eyelashes, and without hair on any part of his body. This boy had the usual supply of hair until he was four years old. The hair then began to fall gradually until it totally disappeared. He was under treatment of the principal cutaneous practitioners to no effect. There was no apparent cause whatever to attribute this total loss of hair to. It was not the sequel of measles, scarlatina, rheumatism, or fever. It began to fall off without any apparent cause. His brother, two years younger, began to lose his hair in detached places. His sisters, younger and older, have a good supply of hair, as have also his parents, who brought him to me. Every stimulating remedy that could be devised had been already tried to no purpose.—B.]

of height which is often described as the symbol of wisdom and experience, and finally proceeds downwards to the temples, which, however, are more frequently characterized by hoary locks than by baldness. The skin, now denuded of its covering, loses its natural aspect. It becomes smooth, yellowish, and sometimes shining like a cicatrix. In this and similar instances, the bulb is completely atrophied or destroyed; in other cases it is only more or less altered, when we may perceive here and there on the bald patches some thin, straggling, discoloured hairs, which show the existence of the hair follicles, however degenerated they may be.

Having arrived at a certain point, senile alopecia may cease to advance further, and become confined within certain limits; or, as more commonly happens, it may proceed slowly and gradually until the whole extent, or very nearly so, of the scalp, be affected; but even in the most extensive cases of baldness, there are always to be found at the back of the neck a few scattered hairs, which sometimes preserve even their normal appearance.

To the type senile alopecia, belong all those cases of premature but irremediable baldness met with in youth and in the prime of life, whether occurring spontaneously, or resulting from causes which profoundly disturb the system, as close application to study, anxiety in the various forms in which it pursues us through life, or excess in venery and wine. Senile alopecia is almost entirely confined to men, and it possesses this distinguishing character, which will prevent it from being confounded with any other form of baldness—it is incurable.

Alopecia, from Functional Disturbance or Disease.

This form of Alopecia is associated with two distinct conditions: for instance, it may be the result of general morbid influence, existing or having existed in the economy, or of functional or organic disturbance, which is not always easily detected; or, on the contrary, it may be produced by local phenomena, an eruption of the scalp, for example; and this double character leads me to describe it in two sub-varieties,—Alopecia, symptomatic of general disorder of the system; Alopecia, symptomatic of local disease of the scalp.

1. *Alopecia, resulting from constitutional causes.*—This variety

is deserving of our best attention, if it were only on account of the obscurity, I might almost say, mystery, with which its history is enveloped. The loss of hair is not in this case the result of primary absence, or of subsequent obliteration of the bulb; nor can it be attributed to faulty nutrition of the hair itself, or said that this has never been secreted, for the bulb is always present, and the hair is always fully developed. This form of alopecia, in fact, depends for its existence upon general and immediate causes, which can be sufficiently understood without attempting to explain their mode of action upon the alteration of the hair; it is, in a word, the external expression of some great constitutional derangement which profoundly affects the system. Thus, for example, it is a frequent sequence or accompaniment of small-pox, fever, consumption, and, indeed, every serious disease of the system, and is usually preceded by an unhealthy matting or entanglement of the hair, somewhat similar to the affection described by authors under the name of *false plica*. Loss of hair also occurs frequently, during or after the period of childbed, after long confinement in prison, under various conditions of misery, and under almost every influence calculated to reduce the vital force. We must also range in this category, loss of hair occasioned by long vigils, mental anguish, excess of venery, when this condition is temporary, and does not possess the peculiar characteristic of senile baldness already described, namely, incurability.

To this class also belongs the variety described under the name of syphilitic alopecia, and to which some authors have given the distinctive appellation of *Pélade*. It is far from being of such rare occurrence as it has been described to be by writers, and for my own part, I have frequently met with cases of it. This form of alopecia is one of the secondary or consecutive phenomena of syphilis, and usually appears after that disease has manifested itself by some other constitutional symptom, but is also sometimes associated with a special eruption, pains of the bones, &c. There are cases, however, in which it occurs as the only external symptom of the venereal poison, and also where it appears as the first symptom of secondary syphilis. Apropos of this latter proposition, a very curious case occurred in my practice lately, of a patient attacked with this form of alopecia, whom I had treated for gonorrheal orchitis. In the space of four months, and without any intermediate symptom

whatever, this patient's black and beautiful hair fell off almost entirely, and the alopecia only yielded to an active special treatment.

Syphilitic alopecia generally commences on the crown of the head, which it rapidly deprives of hair. It may extend thence over the entire scalp, but it is worthy of remark, that this form has less tendency to produce general baldness, than to cause an extensive thinning of the hair, which loses its lustre and natural appearance, and becomes dry, dull, and fragile. It is even discoloured, and readily falls off under the operation of the brush or comb.

The genuine syphilitic alopecia is never accompanied by any local phenomena, either in the form of eruption, ulceration, or desquamation. It is evidently the result of that specific alteration of the system, which develops with greater or less rapidity, and more or less completely, the syphilitic infection. It is seldom generally diffused over the scalp, but exists principally along the upper and anterior part of the head, and is occasionally accompanied by loss of hair on other regions, as the eyelashes, eyelids, beard, &c.

The duration of this variety is necessarily variable, as it depends upon the skilfulness with which a sound rational treatment is administered. Generally speaking, the hair is reproduced, and sometimes as copious and as fine as it was originally; but there are cases in which it ever remains thin, weak, and dull. The latter condition is met with chiefly in persons of advanced life, in whom the secretion of the hair has already begun to fall.

This first variety of alopecia from general causes depends upon certain conditions of the system, and it is necessary not to confound it with the complex variety which I am now about to describe. It is almost always evanescent; and as soon as the constitutional cause which occasioned it is removed, either by the natural reaction of the system, or, as more frequently happens, by the judicious administration of rational treatment, the hair will soon reappear, and cease to fall.

2. *Alopecia symptomatic of a local morbid condition.*—By this definition is meant, loss of hair from disease seated in the scalp, whatever may be its character or gravity.

This variety of alopecia is associated with two distinct orders of things, which it is important to understand. In one case, inflammation is the active agent, becoming a sort of mechanical cause of

the shedding of the hair, the fall of which is facilitated by the presence of the secondary products of inflammation, as scales, incrustations, &c., which occur in all the eruptions of the scalp causing alopecia, with the single exception of vitiligo. In the second case, the alopecia may be either temporary and remediable, as it is most frequently; or permanent and incurable, which is the exception.

The reader who wishes to study the method by which the different forms of inflammation cause the hair to fall, is referred to the history of diseases of the scalp, and under the head of the different eruptions of that region he will find the morbid process fully described. For the present, it will be sufficient to point out those diseases of the head which are either the accidental or essential causes of alopecia.

The passing and remediable form of alopecia, resulting from local causes, occurs during the acute eruptions, as for example, in *eczema* and *impetigo*, and is in both cases always curable. Indeed, it is worthy of remark, that in proportion as the eruption is active or acute, so is the loss of hair temporary and remediable. This variety is also met with, and more frequently than in the preceding cases, during the progress, or at the termination of, certain *chronic* eruptions of the scalp.

Thus, for example, it accompanies herpes tonsurans, pityriasis capitis, psoriasis and lepra, vitiligo and acne sebacea. It is also a result of syphilide of the scalp. This, however, must be distinguished from the form of syphilitic alopecia already described as resulting from general or constitutional infection. When a syphilitic eruption appears on the scalp, it acts, as regards the removal of the hair, precisely as any other form of inflammation—that is to say, locally or mechanically.

If the eruption has left indelible cicatrices behind, the hair will not grow upon those spots, but otherwise it may be safely stated that however extensive alopecia resulting from *local* syphilis may be, it will cease, and the hair will grow again under the influence of rational treatment.

The permanent and incurable form of alopecia resulting from local causes, is the necessary consequence of porrigo favosa, an intractable disease of the scalp.

Diagnosis.—Having now explained, as far as the present state of

anatomical science will permit, the causes of alopecia, *i.e.*, to indicate the morbid conditions in which it occurs, it only remains for us to group together a few general characters, by aid of which we shall be enabled to specify and recognise the different forms of alopecia, and especially to distinguish one from another. Congenital and senile alopecia are obviously so peculiar and self-evident, that it is scarcely necessary to dwell upon their distinctive characters.

However, when the latter form is premature, when it occurs in persons who are still young, the diagnosis may occasion some doubt and hesitation. But if the observer will bear in mind that senile alopecia advances slowly, but uninterruptedly, a character peculiar to itself; that it invariably begins at the upper and posterior part of the scalp; that it proceeds step by step, producing that peculiar modification of the scalp so characteristic of the baldness of old age; and finally, that it is accompanied by canitia, even when it is premature, he may always avoid a mistake on this score.

With regard to the form of alopecia symptomatic of general causes, it is always easy to discover that the loss of hair is the result of some previous severe disease; that it is occasioned, or is at least singularly favoured, by mental disturbance, want of sleep, excess, misery; however, it may be useful to remember that, in this case, the condition of alopecia is complicated with an evident alteration in the structure of the hair, that the scalp is in every part more or less uncovered, that the hairs are not necessarily white, and that the hair is altogether unhealthy, although the alopecia may only be partial.

It may on the other hand, and in spite of all these facts, be difficult to recognise in some cases, the genuine syphilitic alopecia. The diagnosis may, indeed, be assisted by the presence of other special and accompanying symptoms; but we must not forget that there are cases in which alopecia is the only actual expression of the specific infection. In this case it will be necessary, after having ascertained that there are no morbid conditions present or past, to which the denudation of the scalp can be attributed, as serious general disease, excessive fatigue, &c., to bear in mind that the leading character of syphilitic alopecia is, that it is never accompanied by local inflammation in any form, not even by the slightest

desquamation, that it is remarkably diffused over the scalp, and is accompanied by a peculiar condition of the hairs, which are dry, crooked, and sickly looking.

If to these characters are added the antecedent history of the patient, it will not be difficult to discover the true cause of the shedding of the hair.

Alopecia, symptomatic of a morbid condition of the parts, is appropriately described with the diseases which produce it. To understand it thoroughly, it is necessary to study the history of the disease referred to; however, it may be useful in this place to recapitulate the different characters which distinguish the various methods by which the scalp is deprived of hair.

In the acute eruptions of the scalp, as for example, eczema, impetigo, and also certain forms of erysipelas, the hair falls here and there, enfeebled by the inflammatory process, and pulled out by the secondary products of inflammation, or drawn during the necessary operations of cleanliness. Alopecia is in this case evidently accidental. It is not the necessary result of disease, for it may be absent altogether. In pityriasis and acne sebacea, it is also evidently occasioned by a mechanical cause, so to speak; but in these two forms it assumes a poignancy and intensity which gives it a peculiar character. However serious and complete it may appear, it is never permanent. The scales of pityriasis, moreover, may be easily recognised in one case; and with scarcely more difficulty in the other, the sebaceous patches of acne of the scalp.

There are also, in a pathological point of view, diseases specially connected with alopecia. These are: vitiligo, herpes tonsurans, and favus. The smooth, discoloured patches, of a milky white colour, of vitiligo; the greyish, scaly, striking discs of herpes; the transparent cicatrized surfaces of favus, are familiar to every medical man, and are sufficient to form the basis of diagnosis of these interesting varieties of alopecia.

Senile baldness brings with it the inconvenience which attaches to all the attributes of old age. Symptomatic alopecia may always be cured, however extensive it may be. Alopecia, the result of local causes, will be removed with the diseases which occasioned it, except in the case of favus.

Treatment.—For senile or congenital alopecia nothing can be done. It is in those cases that recourse is had to the artificial scalp which has been adopted since the earliest ages to conceal those defects of age or of nature. Alopecia resulting from general disease, or from profound constitutional disturbance, will disappear in most cases with the removal of the cause which produced it. However, in this and similar instances, the efforts of nature may be assisted by useful and efficacious remedies.

These are the cases in which the scalp may be advantageously shaved, and the secretion of the hair stimulated by dry friction, tonic lotions—of rum, for example—the patient being at the same time submitted to a judicious and well devised system of regimen. Everything tending to debilitate the constitution should be removed or avoided, and the tone of the system invigorated by nutritious food. In cases of syphilitic alopecia, local or constitutional, the treatment is the same as that required for the original disease, as mercurials, iodide of potassium, &c.

The appropriate remedies for the forms of alopecia resulting from local causes, are those required to combat the different eruptions of the scalp which may have occasioned them; but it is necessary to add that when alopecia is asociated with *favus*, no remedies will be of any avail—it is incurable, and may therefore be ranged in the same category as senile and congenital baldness.

[Dr. Copland recommends an ointment or pommade of Peruvian balsam and oil of lavender, which I have used in some cases with good effect:—

℞ Prepared lard, ℥ij
White wax, ℥ss,

To be melted over a slow fire, and then add—

Peruvian balsam, ʒij
Oil of lavender, ♏xij,

and mix the ingredients until cold. The parts should be shaved, and then freely anointed with it, especially when the skin is dry, tense, and furfuraceous.

M. Gibert is in the habit of employing, at the Hospital of St.

Louis, the following pommade, which is a good stimulant in cases where the follicles and bulbs are in a state of atony:—

℞ Prepared beef marrow, ʒvj
Oil of sweet almonds, ʒij
Red bark, ʒj.

Dupuytren's ointment is also used at the same hospital, which consists of—

℞ Prepared beef marrow, ℥ss
Acetate of lead, ʒj
Peruvian balsam, ʒiij
Alcohol, ℥j
Tinctures of cantharides, cloves, and canella, of each, ♏xv.

I have found the creasote ointment (a drachm to the ounce) very useful in some cases of partial baldness, arising from atony of the bulbs and hair follicles.

For the active treatment of these cases of loss of hair, in which the apparatus that secretes that appendage is not destroyed, and where medicinal agents are likely to be attended with good results, the reader is referred to the two subsequent pages, in which the treatment of diseases of the hair and scalp by fumigation is described.

[The hair being an appendage of the skin, and the natural covering of one of the most important parts of the body, its loss and diminution are matters of much interest to the medical practitioner, for these alterations are seldom primary, but rather the result of other diseased conditions. Baldness may be the result of imperfect development of the apparatus which secretes the hair, of atony or disordered nutrition of those organs, or of complete atrophy or obliteration of the hair follicles and bulbs, as occurs in the baldness of old age. With the exception of the latter, those morbid conditions are most commonly the sequelæ of a vicious state of the constitution, inducing, at the same time, disease in some other structure or function.*

Baldness may occur at any period of life in the young as well as in the old. It may be limited to a small extent, or extend over the

* Vide Copland's Dictionary of Practical Medicine, Art. Hair.

entire scalp, and it occurs much more frequently in men than in women, which, as Plumbe remarks, is perhaps partly owing to the smaller quantity of fat beneath the scalp in males than in females; for alopecia is often associated with the general reduction of that substance—in youth from great exhaustion or debility, and in old age from its translation from superficial to internal parts—a natural process which occurs at that period of life. Van Swieten attributes the baldness which supervenes during the progress of wasting diseases, to the absorption or removal of fat from beneath the scalp. Loss of hair, to a greater or lesser extent, is an accompanying symptom of several of the eruptions of the head. It may be seen, for example, during the progress of pityriasis, impetigo, ring-worm, and favus. In some instances, the skin is covered with furfuraceous thin scales, which are rapidly reproduced, and seated on an erythematous base. In others, the destruction of the hair is produced by disease of their bulbs, and the skin externally does not seem to be the seat of any lesion whatever.

In senile baldness, for example, there is no visible nor actual alteration in the external cutaneous surface, the disease being produced in this instance, according to Bichat, by the gradual diminution of the cavity of the bulbs, and the obliteration of the follicles. In the latter cases, no remedy or method of treatment will be of any avail. Whatever tends to produce an established relaxation and want of tone in the cutaneous vessels and in the hair follicles and bulbs, becomes a cause of baldness, and hence it is a frequent sequel upon fevers of various kinds. In these and similar cases, in which the organs that secrete the hair are merely in a state of atony, and not destroyed, judicious treatment will succeed—the main object of the local treatment being to excite the capillary circulation of the scalp, and thereby to alter the vitality of the hair follicles and bulbs, so as to enable them to resume their normal functions of secreting and nourishing the hair.

Decoctions of wormwood, walnut-leaves, horehound, lesser centaury, mustard-seeds, in aromatic wine or alcohol of various degrees of strength, myrrh and hellebore, and embrocations of the oils of lavender, laurel, juniper, or of camomile, rosemary, thyme, mace, or turpentine; also, alcoholic solutions of zinc and copper, and the tinctures of capsicum and cantharides; these, and a variety of other remedies too numerous to mention, have been recommended

for the cure of baldness or partial falling of the hair. I have found the action of the remedies above mentioned to be always uncertain, and seldom effect much good. Greasy applications, such as ointments and pommades, are, in the majority of cases of diseases, both of the hair and scalp, positively injurious, and the beneficial effect they are alleged to produce in some rare instances, is, in my opinion, very problematical.

APPARATUS FOR FUMIGATING THE SCALP IN CERTAIN CHRONIC DISEASES OF THAT REGION, INVOLVING LOSS OF HAIR.

From a knowledge of the undoubted efficacy produced by the application of vapour, simple or medicated, to the human skin in cases of inveterate disease of that structure on other parts of the body, it occurred to me that similar applications to the scalp, in cases of eruptive disease involving the loss of hair, would also be attended with good results. Messrs. Ferguson, surgical instrument makers to St. Bartholomew's Hospital, made, under my direction, the apparatus described below.

The vapour apparatus is extremely simple. It consists of a tin jar, about ten inches by four, with a conducting tube, on which is placed a stop-cock, for the purpose of diluting the vapour, or turning it off, and an elastic cap of Vulcanized Indian-rubber, which fits closely to the head, so as to prevent the vapour from escaping. A spirit-lamp, to sublime the appropriate medicinal agent, completes the apparatus for fumigating the scalp. In order to apply the vapour to the face, forehead, or temples, when occasion requires, one or two funnel-shaped tubes of caoutchouc are made to screw on to the metallic conducting pipe, about two inches beyond the stop-cock. Rebellious patches of acne, or of impetigo figurata of the face, may be treated in this manner, without risk of inhaling the vapour.

The remedies I have chiefly employed for fumigating the scalp in the manner described, are iodine, sulphur, mercury, and the gum resins. The hair should be cut close in every instance with the razor-scissors (but the head should never be shaved) before applying the vapour. The application may be continued for twenty minutes or half an hour each time. It will cause an itching or prickling sensation all over the scalp, and the head will then become bedewed with perspiration.

The great majority of diseases of the skin are constitutional, and those of the scalp are not an exception to the rule. Yet every practitioner is familiar with the difficulty of removing the latter by the unaided influence of constitutional treatment. Porrigo favosa, for example, which is one of the most unsightly, as well as the most inveterate of the eruptions of that region, may be temporarily relieved by tonics and fomentations, and the skin even made to appear clean and healthy; but the *virus* still remains, and consequently the *cure* will be but of short duration.

In this, as in other inveterate diseases of the scalp, of constitutional origin, the skin, from the force of habit, adapts itself to the morbid condition, which it retains with singular tenacity against all the usual methods of treatment. In all similar cases, the application of vapour, simple or medicated, as the case may require, to the diseased scalp, will be found a very efficient remedy. Where the object is to *alter the vitality of the parts*, this can be done more effectually by the repeated application of stimulating vapour, (the skin being previously cleansed with any detergent wash, and the hair cut close,) than by the employment of caustic lotions or ointments. Indeed, greasy applications of every kind may be advantageously dispensed with in the treatment of diseases of the scalp. That variety of baldness or loss of hair which is the result of atony, relaxation, or disordered nutrition of the hair follicles and bulbs, already described, will be materially benefited by the employment of the vapour apparatus.—B.]

GLANDERS AND FARCY.

SYN.—*Equinia.*

[As glanders and farcy are fundamentally the same disease, resulting from a common cause, and differing from each other only by situation, I propose to describe and classify them with the pustular diseases to which glanders decidedly belongs. The tubercular nature of the eruption in farcy, would apparently indicate the propriety of placing that variety amongst the tubercular diseases, but it would involve a pathological contradiction to describe two affections so intimately allied as glanders and farcy are, apart, and in distinct classes of cutaneous eruptions.

M. Hamont considers the tubercular lepra of man to be identical with the farcy of the horse, and that the former disease is confined to the poorer classes of society, and never attacks the rich and well-fed, exactly as the latter is developed in an ill-fed and low breed of horses. "Tubercular lepra," says M. Hamont, "appears in man, on the arms, the body, and the nose; ulcers sometimes form within the nose, and secrete a disgusting sanious matter; and in this condition it has a striking resemblance to glanders in the horse."

Glanders may appear in the horse in different forms. It may exist in a simple form or combined with farcy. Either of these varieties may appear, and run through their course separately, or, as commonly happens, one appears first, and after a certain period the other is superinduced. For example, the disease may begin with farcy buds and terminate in glanders, and *vice versâ*. Finally, they may assume an acute or chronic character.

The following are a few of the principal symptoms of glanders in the *horse*:—Intense inflammation of the pituitary membrane attended by erosions, which soon pass into chancre-like sores; swelling of the lips and nose; rapid extension of the ulceration giving rise to a purulent discharge, which often passes into a purplish or bloody and horribly fœtid sanies; subsequently, gangrene of the membrane of the nose, with increased discharge, sometimes with slight hæmorrhage; swelling and pain of the sublingual glands; inflammation of the conjunctivæ and eyelids, quickly passing into a livid and swollen state, with an offensive sanious discharge, and fever of a putrid or malignant character; respiration becomes laborious and hurried, and the superficial blood-vessels congested, the animal dying in a few days, or after a longer or shorter interval.

When farcy supervenes during the progress of the disease, it is then called *farcy glanders*, and commonly presents the following additional appearances:—Small glandular tumours about the legs, lips, face, neck, and other parts of the body; these tumours vary in size and in the rapidity of their progress to ulceration. They sometimes create little inconvenience, particularly in a chronic state; but at other times they are large, painful, numerous, and rapid in their course. They are at first hard; soon become soft, burst, and degenerate into foul ulcers, with abrupt edges, and of a

pale glossy appearance. Lines of communication are ordinarily observed between these tumours or ulcers, especially when seated on the inside of the limbs; these lines are inflamed or enlarged absorbents. Such are the principal features of glanders and farcy in the horse.

In strict pathology, as Mr. Percival observes, glanders and farcy constitute one and the same disease of the lymphatic vessels and their glands. The disease originates in these vessels, and for a time confines itself to them. In the course of its progress however, it extends into the contiguous tissues, affecting in one case the cutis, in the other the mucous lining of the air passages. No wonder therefore, that the appearances of farcy should differ so much from those of glanders, and that the lesion of the one should be much more manageable than the other. Inflammation in the cutis is a different disease from that of a mucous membrane, productive of different phenomena; hence the apparently wide differences between two diseases in their nature alike. Leblanc describes the farcy bud to be the result of the coagulation of the lymphatic fluid accumulated in the vessels in an incrassated form, and obstructed by the valves, which, as Coleman pointed out, are insusceptible of the farcinous inflammation, and this will account for the peculiar plump, spheroid shape of the farcy-bud, and of the pustule which succeeds it. The *skin* in the neighbourhood of the bud becomes indurated and thickened, sometimes to a remarkable degree. It becomes white, tough, and hard, cutting like so much white leather rather than skin, especially in the immediate vicinity of the buds; and several of the superficial buds which have already become pustular, will be found imbedded in its thickened substance. When this indurated cartilaginous-like cutis is cut through, chains of farcy-buds and pustules are exposed, invested with cellular tissue, full of infiltration of a jelly-like citron-coloured fluid. The disease sometimes extends deep between the muscles, forming abscesses, and in inveterate cases, according to Dupuy, even the bones of the limbs become involved. There is a variety called "button farcy," which does not select the course of the lymphatics for its seat, but is diffused in the form of numerous small button-shaped tumours over the body, and as they remain small in all their stages, they are supposed to resemble the *miliary* ulceration of glanders. They are

also more intimately connected with the *cutis vera* than the other forms of farcy bud.

Symptoms.—The symptoms of acute glanders in *man*, are essentially typhoid. The disease usually commences with general constitutional disturbance: headache, depression of spirits, prostration of strength, stiffness, and constant pain of the joints, aggravated by motion, irritability of the stomach, and excessive thirst. The patient complains of great heat about the nose and windpipe, accompanied with a copious viscid discharge, and with pain in the head, back, and limbs, and constriction about the chest. After a certain period, the nose and surrounding parts become swollen, hot, excoriated, and of a bright red or livid colour: one or both eyes are inflamed, or completely closed; a profuse tenacious mucus, at first of a deep-yellow, but afterwards of a bloody or dark sanious appearance, exudes from the nostrils, and occasionally from the eyes; hard, round, phlyzaceous pustules appear on different parts of the body; the temperature of the skin is increased; the pulse is rapid, soft, and weak or undulating; respiration quick, weak, and shallow. The tongue dry, rough, and reddish brown; the body is bathed in copious and offensive perspiration, the thirst unquenchable, the stools are slimy, and horribly fœtid; the voice is weak, and the mind wandering. In the course of a few days these symptoms become still more aggravated; diffused abscesses appear in various parts of the body, especially about the joints. The fever assumes a more malignant character, the disease extends to the air-passages and lungs; fresh abscesses form and suppurate, the nose and surrounding parts become gangrenous, the perspiration is more profuse and sour; finally, a state of general collapse ensues, and death is ushered in by low muttering delirium. The fœtor from the discharges, and from the whole body, towards the close of the disease, is insupportable.

When the disease is complicated with farcy, constituting the variety called *farcy glanders*, we may observe the following additional symptoms:—Small tumours on different parts of the body, but more numerous on one side than the other, having a glossy reddish appearance, which soon changes to a dark brown. They also affect the head, or even the face, and chiefly on one side; they

are sometimes exceedingly painful, they crack on the surface, and a thin acrid sanies exudes. They vary in size, and are generally accompanied with pustules in different parts of the body; the fauces are injected with blood, and of a purplish hue. The inflammation of the lymphatic vessels and ganglions is generally accompanied with diffuse inflammation of the subcutaneous cellular tissue. If the disease be inoculated, as it commonly is, a true pustule sometimes forms in the vicinity of the puncture, to which succeeds an ill-conditioned ulcer, with raised edges, and of a greyish aspect. An inflamed red line, or cord, produced by the swollen and inflamed lymphatics, is then observed along the limb, and the lymphatic glands of other parts of the body become sympathetically affected. Simple farcy may thus slowly but steadily proceed to the destruction of life, or acute glanders may supervene and hasten that event.

Morbid appearances.—Abscesses are generally found in the lungs, which are engorged with dark blood; the bronchi are congested, livid, and partially filled with a dark frothy mucus; the nostrils and frontal sinuses contain a brownish glutinous matter, and the lining membrane is ulcerated and studded with small tubercles, which are generally ulcerated. The mucous membranes of the stomach and bowels are softened, discoloured, and sometimes studded with tubercular indurations, similar to those on the nose. When glanders is complicated with acute farcy, the following additional appearances may be seen: an eruption of pustules and bullæ, in various stages of development, on different parts of the body, especially on the face, limbs, trunk, and genitals. The eruption sometimes resembles varicella, and ecthyma, and when the bullæ are large, rupia, and the yaws.

The pustules, according to M. Rayer, do not contain true pus, until at a late period of their progress, and then but in small quantity. In the nascent state they resemble firm reddish papulæ, in which condition they neither contain pus nor fibrinous deposit. At a later period they contain a plastic matter, which does not flow like pus. When examined by the microscope, this matter does not present pus globules; but blood globules are seen in a state of morbid alteration, some of which preserve their peculiar form and yellowish colour. Under this plastic deposit, the cutis pre-

sents small red spots, and is depressed and excoriated, but the deposit itself is neither circular nor depressed in the centre like the disc of variola; neither are the pustules umbilicated like those of small-pox. The farcinous pustules, when more advanced, penetrate into the substance of the cutis vera, the tissue of which is partly destroyed. Abscesses are invariably found in the subcutaneous and intermuscular cellular tissues in the human subject, in various parts of the body; they are not so frequently met with in the quadrumina. The veins are more or less inflamed. Depositions of purulent matter are found in the lungs, the tissue of which is considerably softened, and there is an effusion of a sero-sanguineous fluid in the pleura and pericardium. M. Rayer mentions a case in which a small abscess was found in the brain, and an effusion of sanguineous serum in the arachnoid.

Causes.—Glanders and farcy originate in the quadrumina. They are never developed spontaneously in the human subject, and when they do occur in man, they have been transmitted to him from the lower animals; but they may be propagated from one human being to another. It is to be regretted that the etiology of these affections in the quadrumina is still involved in so much obscurity, for it is clear that our knowledge of their nature, so far as the human being is concerned, must be of little avail, whilst their remote causes in the animals in which they originate are matters of mere conjecture.

Glanders and farcy are essentially contagious diseases, whether developed in man or in the quadrumina. They are, moreover, decidedly *infectious* as well as contagious in the latter class of animals, *i. e.* the contagious principle may be transmitted through the medium of the atmosphere, as well as by actual contact from one animal to another. I have known several instances in which there was no possibility of contact with glanderous matter, and yet the disease was developed in healthy horses. A gentleman of fortune in the west of Ireland, had had his stud of horses infected with glanders. Every particle of wood-work in the stables, including stalls, rack, manger, &c., was taken down or replaced with new materials. The plastering on the walls was completely removed, and the pavement ripped up, and all was replaced with

entirely new work; but the first horses that were again put into those stables became *infected*, and they were ultimately razed to the ground. It would even appear that the contagious principle remains for a lengthened period, sometimes for years, in any stable or shed where glanders or farcy may happen to have been developed.

Although it is by no means proved that these affections may be transmitted to the human being through the medium of the atmosphere, still their history shows that the effluvia of glandered bodies is capable of exciting a malignant disease, if not real glanders, in man, when exposed to its influence. The cases related by Tarozzi, for example, support this view. Dr. C. Williams also relates a case, in which a girl, sleeping over a stable where a glandered horse was kept, became affected with a disease very analogous to glanders, although she did not come in contact with glanderous matter. There is another case in the *Bull. de l'Acad. de Médecine*, November, 1841, in which it is stated that a dresser at the Hospital Neckar, who had the care of a glanderous patient, contracted the disease, not by inoculation, but in the same way that small-pox or scarlatina is contracted; in other words, by infection. However, as the dresser assisted at the autopsy of his patient before the disease was manifested in himself, this case is open to objection. A similar case is related in the *Medical Gazette*, as already mentioned, in which the nurse took the disease from the patient she was attending, and died of it. If these examples prove nothing else, they show at all events that glanders may be communicated from one human being to another. M. Hamont's researches go to prove that the old notion of glanders being always the result of damp, narrow, and ill-ventilated stables, is erroneous. He maintains, 1. That the original causes of glanders and farcy do not exist in stables. 2. That the habitation exerts but a very secondary influence towards their development. 3. That an insufficiency, or a bad quality of food may excite both glanders and farcy in degenerated animals; and lastly, that they never appear spontaneously in the blood-horse when well-fed and taken care of.

The matter of a glandered sore will produce *farcy*, and that of a farcy-bud will produce *glanders*—a convincing proof of the identity of these diseases.

Morbid Anatomy.—The morbid appearances are the same both in man and in the horse. Clusters of white granules, or tubercles, or as Dr. Craig describes it, of matter like putty or thick pus, are found in whatever tissues the disease has invaded, in the Schneiderian membrane, in the antrum and frontal sinuses, and in the vicinity of the different abscesses. The nasal cavities mostly contain a thick brown gelatinous secretion, and are studded with foul gangrenous ulcers, from which project fungous clusters of tubercular matter.*

Diagnosis.—Farcy may be mistaken at the commencement of its progress for the diffused inflammation consequent upon *dissection wounds.* They are both characterized by inflammation of the lymphatics and absorbents, by purulent deposits in similar tissues, and are ushered in and accompanied by the same train of typhoid symptoms. The *cause* alone distinguishes these two series of pathological phenomena. Farcied or glandered matter, or an atmosphere contaminated with their effluvia, is necessary to engender farcy; but the matter of a fresh and healthy subject is as likely—some think more so—to produce dissecting wound inflammation as that of one in a state of decomposition. A *fresh* human brain is more dangerous to examine than a subject dead of cholera. At a later period, when the eruption is fully developed, and when gangrenous bullæ and diffused abscesses are mixed with the pustules, the diagnosis will not be so difficult. Besides, the peculiar characters of the pustules, and the nature of the contained fluid, already indicated, together with the history of the complaint, will at once distinguish farcy from all other diseases arising from the introduction of other morbid or putrid matter into the system. The same characteristic phenomena will distinguish it from phlebitis, and from the different pustular, bullous, or even tubercular eruptions, which it may resemble in its various phases.

Prognosis.—The prognosis of the acute varieties of glanders is highly unfavourable. In the chronic state life may be prolonged for a certain period, but in such a condition that death would be preferable to it. In the horse, however, this form is not so unfavourable, for the animal may still continue to work, with farcy-

[* Vide Druitt's Surgeon's Vade-Mecum.]

buds of considerable size along the legs, without the health being seriously injured, and the tumours may ultimately disappear. Although cases of "cure" have been recorded, I doubt very much if they were cases of real glanders, for, as far as our present knowledge goes, glanders still appears to be an incurable disease.

Treatment.—The treatment of glanders, like the remote causes of that disease, is vague and uncertain, and as yet no remedies have been discovered that can prevail against it. The prophylactic measures are, however, more evident. As we know that the disease, when once generated, may be transmitted by inoculation, every precaution should be taken to obviate that event. For example, persons going about or handling glandered animals, whether brute or human, should frequently wash their hands, and perhaps their face as well, in a strong solution of alum, the slightest cut or scratch on any part of the skin that is exposed should be covered and protected, and the attendants should wear long gloves.

Various antiseptic, stimulating, and tonic remedies have been recommended during the progress of the disease, with the view of arresting it, and at the same time supporting the patient's strength when typhoid symptoms supervene. These are pyroligneous acid, creasote, camphor, chlorate of potash, warm turpentine, the sulphates of copper and iron, quinine, &c., but their administration has been attended with little benefit. However, Dr. Elliotson relates a case in which chronic glanders in the human subject was cured in a few weeks, by the constant injection of a solution of creasote up the nostrils. The abscesses should be opened by free incisions. The inflamed lymphatic glands have been extirpated in some cases of chronic farcy.

Local bleedings, emollient poultices, and subsequently alkaline poultices, have been prescribed to allay the pain of the ulcerated tumours, and to alter the vitality of the inflamed and enlarged glands, before they suppurate. In case of inoculation in the thigh, or in any part of the body where a cupping-glass may be applied, it should be instantly employed, and the wound should be deeply cauterized immediately afterwards. In the treatment of glanders, Mr. Druitt says, it is necessary to open all abscesses as soon as they form; to syringe the nasal cavities with solutions of creasote, and to support the strength and abate the thirst with wine and soda-water.

Injections of creasote have cured both the acute and chronic glanders; but almost any other treatment that can be named, has been found of no service. Depletion is inadmissible. The effluvia must be counteracted by fumigations of chlorine and aromatics. In the treatment of farcy, likewise, the chief points are to open all abscesses early, and support the strength. Any swollen glands should be extirpated.*—B.]

* Op. cit.

PAPULÆ.

Papular Eruptions.

The diseases belonging to this order are characterized by small, firm, and solid elevations of the skin, called *papulæ*. They are slightly prominent, never contain either pus or serum, and are generally attended with distressing itching. Sometimes they are merely the result of a morbid enlargement of the cutaneous papillæ, and sometimes elevations of the skin itself.

These diseases usually assume a chronic form, and their duration varies from a week or two to several months, and even years, as in prurigo, for example. There is no region of the body on which they are not occasionally developed. They are sometimes confined to a single region, but most frequently they affect localities very remote from each other at the same time. When the eruption appears on the limbs, it is usually on the outer aspect, and in the line of extension. When it affects the trunk, it generally appears on the back.

Symptoms.—The papular diseases are always preceded by pretty severe itching, and are slowly developed. A number of small slightly prominent points first appear, usually the colour of the skin, but often of a red or whitish tint. They gradually enlarge, and on passing the fingers along the skin, small, round, hard, prominent elevations are distinctly felt. They are generally distinct, and much smaller in lichen than in prurigo. These affections are rarely accompanied by febrile symptoms. They terminate in resolution, more frequently in slight desquamation, and occasionally in a slight degree of ulceration, which supervenes at the summit of each papule, changing the aspect and condition of the disease; hence the name *lichen agrius*. A reddish-yellow discolouration of the skin of the affected parts generally remains for a long period, even for years, after the disappearance of the eruption.

Causes.—These affections are not contagious, and are usually developed without any appreciable cause. Sometimes they are evidently produced by poverty and want of cleanliness, as often is the case in prurigo. [I believe the papular eruptions are the result of a morbid condition of the cutaneous nerves—that they are, in fact, the *neuroses* of the skin—in which the hair follicles, sweat ducts, &c., are ultimately involved.—B.]

Diagnosis.—The diagnosis of the papular affections is not in general difficult. They may sometimes resemble certain forms of scabies and eczema, but, with the slightest attention, the elementary character of the eruption will readily be detected.

Prognosis.—The prognosis is not unfavourable, except that the disease may be prolonged for a considerable time, and alter the vitality of the skin; and the insupportable itching with which it is accompanied may produce evil results, as in prurigo of the pubes, for example.

Treatment.—Sometimes the papular diseases yield to the simplest remedies; they are, however, most frequently obstinate and rebellious, even under the most energetic treatment. [I have employed anti-periodics and anti-spasmodics in severe cases of these affections with benefit.]

There are two genera in this order, *lichen* and *prurigo.*

LICHEN.

SYN.—*Papulæ; Papulæ siccæ; Scabies sicca; Scabies agria; Dartre furfuracée volante.*

The term lichen (λειχήν) was regarded formerly as a synonym of impetigo, but Willan and Biett have applied it exclusively to a papular affection, characterized by minute, hard, and sometimes slightly red, elevations of the skin; almost always agglomerated, and accompanied by severe pruritus. It sometimes assumes an acute, but more frequently a chronic character. All parts of the body may be affected; sometimes it is general, but more commonly confined to one or more regions—the hands, forearms, neck, and face being its most frequent seats. It appears in two very different forms; lichen simplex and lichen agrius.

Lichen simplex appears in the form of an eruption of very small agglomerated papulæ, rarely larger than a millet seed. When the disease assumes an acute form, they are red, inflamed, and accompanied with heat and distressing itching. In about three or four days the redness diminishes, a slight furfuraceous desquamation is established, and the disease terminates before the second week unless a fresh eruption takes place. The papulæ are neither red nor inflamed in the chronic form; on the contrary, they are generally the colour of the skin. They are preceded by a slight itching, and are hard, prominent, and firm to the touch; imparting to the fingers a kind of prickly sensation. These papulæ remain stationary for an indefinite period; a new eruption may break out when the former declines, and thus prolong the disease even for some months. This variety is always accompanied by a considerable degree of thickening of the skin, and frequently by pretty severe exfoliation. Lichen simplex usually appears on the face and trunk in the acute form. In the chronic state, it commonly affects the limbs and dorsal aspect of the hands.

Symptoms.—Unless when it is diffused and very acute, this affection is never preceded or accompanied by febrile symptoms. Formication and itching are its only precursors. Various terms have been applied to the disease, according to certain differences in its seat, form, and aspect. 1. When the papulæ are developed at the roots of the hair, which is a very obstinate form, it is called *lichen pilaris*. 2. When it occurs on the limbs of old, debilitated subjects, the papulæ are not prominent, but are frequently mixed with spots of purpura hæmorrhagica, and the eruption assumes a violet tint—hence the name *lichen lividus*. 3. Sometimes the papulæ appear collected in regularly-formed circular groups with defined margins—*lichen circumscriptus*. These patches extend by the development of fresh papulæ round the margin, whilst the centres heal with slight exfoliation. They are rarely distinct, but are more or less numerous, and then run together at their borders. 4. Biett has described a very rare variety under the name of *lichen gyratus*. We have seen several cases of this kind at the Hospital of St. Louis. The papulæ form a sort of elongated band, extending from the anterior part of the chest to the inner surface of the arm, twisting on itself, and following the course of the ulnar nerve, until

it reaches the little finger. Independently of these forms, which are merely modifications of lichen, there are two other much more important varieties of that disease, namely, lichen urticatus, and lichen strophulus.

Lichen urticatus.—In this variety the papulæ are numerous, and much larger than in any other form of the disease; they are inflamed, elevated, and confluent like the stings of nettles. They appear suddenly, and are attended with a painful, distressing pruritus. It most frequently attacks children, females, and persons of a fine delicate skin, in the spring, and during the heat of summer. It usually attacks the face and neck, but may appear on the extremities. The eruption is irregular, transitory, and often reappears soon after it has subsided. This affection terminates by resolution, or by slight furfuraceous desquamation.

Lichen strophulus, a papular disease peculiar to infancy and childhood, and commonly called *red gum*, *white gum*, *wildfire*, and *tooth rash*, generally attacks children at the breast. It always assumes an acute form; the papulæ are sometimes redder, sometimes paler, than the surrounding skin, and are accompanied by severe itching, which is always aggravated by the heat of the bed, and is liable to severe exacerbations. This variety presents considerable diversity in its colour and form, and these various appearances are often seen co-existing in the same infant. When the papulæ are *red* or inflamed, prominent, and mixed with erythematous patches, the eruption is called *strophulus intertinctus*. When they are small, numerous, set close together, and confluent, they constitute the modification called *strophulus confertus:* again, when they are disposed in circular clusters, and diffused over different regions, the disease is called *strophulus volaticus*. MM. Guersent and Blache have recorded a remarkable case, in which the papulæ were much elevated, and seated in the centre of petechial spots. When the papulæ are *white*, small, limited in number, and surrounded with a slight inflammatory areola, the disease is designated *strophulus albidus;* when they are larger, more projecting, and without any inflammatory blush, it is called *strophulus candidus*. Lichen strophulus generally appears without any appreciable cause. It accompanies the process of dentition, and sometimes seems connected with internal disease. Its duration varies from one to three

or four weeks. It is an ephemeral disease, and is never dangerous. The only treatment it requires are a few tepid baths for the infant, and some cooling and refreshing drinks for the nurse. The physician should always endeavour to ascertain if it is produced or kept up by any internal organic lesion.

Lichen agrius may appear spontaneously, or it may succeed to lichen simplex. When it appears spontaneously, the papulæ are very small, red, acuminated, inflamed, and developed on an erythematous surface of limited extent, which is generally attended with heat and painful tension. Instead of subsiding on the fourth or fifth day, they continue increasing; slight ulcerations form on their apices, whence issues a sero-purulent fluid, which concretes, and forms yellowish prominent crusts, soft and slightly adherent. These incrustations fall off, and are then replaced by thin scaly scabs. Sometimes the redness diminishes, the inflammation disappears, slight desquamation ensues, and the disease terminates about the twelfth or fifteenth day. But frequently the discharge continues, and new crusts are formed, by which the disease is prolonged considerably. The itching which accompanies it is often so intense, that the patient seeks the hardest substance to rub himself with, and this invariably aggravates the pruritus. It may continue in this manner for several weeks, or it may pass into the chronic state, when the scaly incrustations disappear, and are succeeded by slight exfoliation; the skin is often considerably hypertrophied. This form may last for months.

Lichen simplex may, as already mentioned, pass into the state of lichen agrius, in which event it is accompanied with heat and smarting, instead of pruritus. The papulæ are confluent, and are surrounded with a small reddish areola; they soon become red themselves, and the eruption pursues the same course as idiopathic lichen agrius. Sometimes the inflammation is less severe, of shorter duration, does not extend over the whole seat of the eruption, in which event it may produce a favourable change in the disease. This variety often appears on the face; it is seldom general, and occurs most frequently in young persons, and in adults of strong and vigorous constitutions.

Causes.—Lichen is not confined to any period of life, or to either sex. It is met with most frequently in spring and summer. It is

frequently produced by extreme heat; the direct rays of the sun, for example, may develop the eruption on the face. It is very common in tropical countries, hence the name *Lichen tropicus.* It sometimes is produced by grief, and by the intemperate use of ardent spirits. There are certain local varieties depending on distinct local causes; as for instance, the disease is frequently seen on the hands of grocers, and persons who are much in the habit of handling pulverulent substances. It occurs on the arms of cooks and blacksmiths, from exposure to heat, and is not unfrequently a consequence of gastric derangement, especially in infants.*

Diagnosis.—The diagnosis of lichen is often very difficult. *Lichen simplex* may, in particular, be confounded with eczema, scabies, and prurigo. The solid, firm, cuticular elevations of lichen, which for the most part appear on the external surfaces of the limbs, together with the severe itching, will readily distinguish it from eczema, which is characterized by transparent vesicles, generally situated on the abdomen and on the internal aspect of the arms, accompanied merely with a slight prickly sensation. The itch, independently of its vesicular character, so different from that of lichen, generally appears on the limbs, in the line of flexion, in the folds of the joints, and between the fingers. The former is a contagious disease, and its vesicles are distinct, whilst the papulæ of the latter affection are crowded together and confluent. The papulæ of prurigo, like those of lichen, are developed on the external aspect and line of extension of the limbs, but they are broader, flatter, and their summit is generally torn, and covered with a small blackish crust, formed by a minute clot of blood. The itching is generally slight in lichen simplex, whilst it is burning and intense in prurigo.

Lichen circumscriptus may be confounded with *herpes circinatus;* but herpes is seated on a more inflamed base, whilst the former retains the natural colour of the skin. The patches of lichen are papular at the centre, as well as at the circumference. The centre

[Simon regards lichen and strophulus as identical, and is of opinion that the papulæ of lichen are caused by fluid exudations into the cutis. The cuticle is not separated from the cutis, nor in any way altered, except in some cases of lichen agrius, when it is thickened. Hebra places these papular eruptions among the diseases of the hair follicles. In my opinion they are affections of the cutaneous nerves. See page 278.—B.]

of herpes generally remains free; besides, the other is not a vesicular disease. The remains of the vesicles of herpes present numerous small round points, encircled by a small whitish border, formed by the epidermis which constituted the base of the vesicle, and is detached. The surface of lichen is rough to the touch. The same characters will distinguish it from eczema, with which it is often confounded, and which never appears under the form of small circular patches. *Lichen urticatus*, in consequence of the large size of the papulæ, may sometimes be mistaken for erythema papulatum, or syphilitic lichen. The patches of erythema, however, are much larger, less red, and not so prominent. They are never accompanied with that intolerable itching which usually attends this variety of lichen. The erythematous eruption is not reproduced, like lichen, soon after it has disappeared. The papulæ of syphilitic lichen are of a coppery colour; they are not inflamed, like those of lichen urticatus, nor accompanied with that continual pruritus. The syphilitic papulæ are not fugitive, and they pursue a more tedious course than the former. Besides, there are generally other venereal symptoms present—as iritis, for example—which will clear up the diagnosis.

Lichen agrius, in its different stages, may simulate impetigo, acute and chronic eczema, and psoriasis. The confluent and ulcerated papulæ resemble acute eczema; but there are always a few papulæ to be seen scattered round the morbid parts, which will at once distinguish them. Lichen may be distinguished from impetigo by its small, thin, soft, slightly adherent scabs, which are generally surrounded with inflamed papulæ; whilst the elementary lesion of the latter—an eruption of pustules—is never observed in any form of lichen. The squamous crusts of psoriasis are always thicker than the furfuraceous desquamation of chronic lichen agrius. Unless in psoriasis inveterata, these scabs are succeeded by red and tumefied patches; but even then its characters are so well marked that it cannot be mistaken.

Prognosis.—Lichen is never a severe disease; but its obstinate nature, its frequent eruptions, and the annoying pruritus which accompanies it, make it a very troublesome complaint. Lichen simplex is especially a slight affection, and rarely continues longer than two or three weeks. Lichen agrius, on the other hand, is

more rebellious and unmanageable. In lichen inveteratus the skin is dry, rough, and furrowed with deep wrinkles, especially about the joints. The exhalant functions of the skin where the eruption is seated are wholly suspended. Biett had observed it retain this dry character even in the vapour-bath. Lichen may be complicated with the pustules of impetigo, and even with those of ecthyma. Although it may continue for a long period, it always terminates favourably, by resolution or desquamation; but it is never converted into psoriasis or impetigo, as Willan alleged.

Treatment.—Acute lichen simplex requires no other treatment than diluents and tepid baths, or sometimes cold baths, which are often the only kind of service in lichen urticatus. When it assumes a chronic form, acidulated lemonade, mild laxatives, and alkaline or sulphureous baths, are necessary. Tepid local baths, rendered emollient with the decoction of bran, and afterwards alkaline baths, containing the subcarbonate of potass, in the proportion of half an ounce or an ounce to four or five pounds of water. These remedies will in general suffice; but, in some obstinate cases, friction with the calomel and camphor ointment, or the proto-iodide of mercury, may be advantageously employed.

In lichen agrius, if the patient be young and vigorous, venesection, and local bleeding by leeches round the diseased parts, will often be very serviceable, if practised at the commencement. Diluents, emollient applications, and severe dietetic regimen, and at a later period dilute nitric or sulphuric acid, should be given in barley-water, mild purgatives being at the same time administered. Sulphur or alkaline baths are very useful when the inflammation is subsiding; they aggravate the disease when employed at the commencement. In very obstinate cases, the arsenical preparations have been found of great service; Pearson's solution is the most appropriate for this disease. In these cases, and even in the chronic form of lichen simplex, Biett has used the Asiatic pills with success, the patient taking one daily for a month, or longer. In chronic lichen agrius, friction with an ointment composed of fifteen to twenty grains of the biniodide of mercury to an ounce of lard, is often attended with much benefit.

[The simple forms of lichen are often connected with disorder of

the digestive organs, the irritation of the mucous surface being reflected on the skin. In these cases the disease is amenable to treatment, sometimes of a very mild character. Attention to diet, warm baths, and subsequently alteratives and mild tonics, will be sufficient. But the chronic forms of lichen, especially in persons advanced in life, are as intractable as the former are the reverse, and will often give the practitioner more trouble and anxiety than perhaps any other cutaneous eruption. If my view of the pathology of lichen be the correct one, (see page 278,) tonics and antispasmodics are the remedies indicated for internal use, as strychnia, aconite, arsenic. The urine in chronic cases of lichen, particularly in females, is pale and limpid, and presents many of the characters of that secretion in hysterical patients; indeed, the urine should always be examined in this, as well as in most other cutaneous diseases, for it will often afford valuable indications as to treatment. I have found a mixture containing the third of a grain of strychnia in eight ounces of distilled water, a table spoonful to be taken twice or thrice a day, a very valuable remedy in cases of lichen of long standing and inveterate character. The mineral acids or alkalies, according to the condition of the urine, may be occasionally alternated with the above mixture. Among the variety of external applications for allaying the distressing itching, chloroform, as recently recommended by M. Cazenave, in the form of lotion, will be found very efficacious. He uses it in the proportion of fifteen minims to four ounces of distilled water, to be put into a bottle that will hold double the quantity, for the purpose of shaking it up for use. He also recommended an ointment which varies in strength from thirty to sixty minims to an ounce of simple cerate. The late Dr. Thomson recommended the following lotion, which I have sometimes found serviceable:—

℞ Acidi Hydrocyan. dil. f℥iss
Potassæ Liquoris f℥j
Aquæ Rosæ f℥vss. Misce.

Ft. lotio—to be applied with a sponge, when the itching is troublesome. The creasote, (ʒss to the ℥j,) the citrine, and the stramonium ointments are said to be useful in some varieties of lichen.—B.]

PRURIGO.

SYN.—*Pruritus; Cresmos; Scabies papuliformis.*

This disease is characterized by an eruption of papulæ, larger than those of lichen, of the natural colour of the skin, and commonly situated on the external surface of the limbs, and in the line of extension. It is an essentially chronic affection, lasting for months, and even years, and is accompanied with a burning and intolerable itching. It generally occurs about the neck and shoulders, but it sometimes extends to the face, trunk, and limbs, and assumes a severe character. It is occasionally confined to a single spot. Willan describes three varieties,—*Prurigo mitis*, *Prurigo formicans*, and *Prurigo senilis*,—which are admitted by most dermatologists. The two first differ from each other merely in degree, there is no fundamental distinction between them. The last variety has some peculiar characters.

Symptoms.—Prurigo mitis appears in the form of minute, slightly-prominent papulæ, perceptible to the touch, and accompanied with a distressing pruritus. This is the mildest form. Prurigo formicans throws up larger, more prominent, and at the same time flattened papulæ, accompanied with a still more intolerable itching than the former, always aggravated towards evening, and by the heat of the bed; and which has been compared to the sensation that might be produced by innumerable ants gnawing the skin, or to that of hot needles piercing it. The papulæ are distinct, of the same colour as the skin, if not torn by the nails, and are almost invariably seated on the back and external aspect of the limbs. In young subjects, they are not very numerous. The itching is then so severe, that the patients, in endeavouring to find relief, tear them open with their nails, and a drop or two of blood oozes out, and forms black, thin scabs, which, though accidental, are pathognomonic. Sometimes this thin black scab falls off, and leaves an elevation, which is scarcely perceptible, and in some cases, the papule even entirely disappears.

The papulæ which have not been torn disappear by absorption, or by slight desquamation, and the disease terminates in two or

three weeks. More frequently, however, the papulæ continue for a long period, and the disease is prolonged for months by the development of a new eruption. In old people, and in weakly children, prurigo often continues for two or three years, sometimes for an indefinite period. It becomes general, the papulæ are large, hard, and prominent. The eruption, which is accompanied with considerable thickening of the skin, is attended with occasional exacerbations, during which the papulæ become confluent. The skin is tumefied and inflamed; a number of vesicles, pustules, and boils are developed; and abscesses, accompanied with febrile symptoms, and those of gastric irritation, frequently supervene. It is in severe and rebellious cases of this kind that the patient is tormented with that distressing and insupportable burning pruritus, even a true description of which appears exaggerated and unfounded. When the papulæ are numerous, and are frequently reproduced on the same parts, the cutaneous tissue is profoundly altered, and a number of small slight cicatrices may be observed with the naked eye over the diseased surfaces.

Causes.—Prurigo occurs at all ages, most frequently in children and old people, and at all seasons, but oftener during spring and summer. The exciting causes are low and damp situations, bad nourishment, infected beds, poverty, want of cleanliness, the use of salt food, shell-fish, privation, and strong mental emotions. But it appears in all conditions of life.

Diagnosis.—The diseases with which prurigo may in particular be confounded are lichen and some of the vesicular eruptions. It is distinguished from lichen by the larger size of the papulæ, by the black incrustations, and by the intense burning itching. Scabies is the disease with which it is most likely to be confounded. The papulæ of prurigo are flattish and of the same colour as the skin, whilst the vesicles of the itch are acuminated and rose-coloured. The vesicles of the latter terminate in thin yellow scabs, and appear in exactly opposite situations to those in which the papulæ are developed, viz., on the abdomen, the internal surfaces of the arms and thighs, and in the line of flexion. The itching of scabies is not so intense. Prurigo is not contagious, and may co-exist with lichen, scabies, and eczema, and may be complicated with the

pustules of impetigo and ecthyma. It terminates by resolution, or by furfuraceous desquamation.

Prognosis.—Prurigo is never a dangerous disease. It is, however, obstinate, unmanageable, and exceedingly harassing to the patient, and very liable to return. It is often incurable in old people and in persons of debilitated constitutions, who have suffered much from privation and frequent repetitions of the disease.

Treatment.—The treatment of the mild forms—prurigo mitis and prurigo formicans—consists in alkaline drinks, two drachms of the subcarbonate of potassa to the pint, and simple baths. Biett was in the habit of ordering one part of the alkali to three of sulphur, which was generally attended with good effect. In severe cases it may be necessary to have recourse to acidulated drinks.

When the constitution is broken down, and the digestive organs deranged, the patient will derive benefit from succulent and milk diet. If the skin is delicate and irritable, all irritating applications should be avoided; if, on the contrary, the skin is rough and dry, saline and alkaline lotions ought to be employed; and alkaline, vapour, or salt-water baths alternately with them. Ointments are seldom of any use. When the pruritus is subsiding, friction with alkaline or sulphur lotions is often serviceable; earlier in the disease they are injurious. The internal use of opiates is sometimes necessary to allay the irritation produced by the excessive itching. In young persons and in children, sulphur combined with magnesia is often beneficial, and at the same time diluents, simple or emollient baths, and at a later period alkaline baths in the proportion of one to four ounces of subcarbonate of potass to each bath, according to the age of the patient. Venesection is seldom necessary, unless in young and vigorous subjects; it may be very injurious. All these measures should be accompanied with an appropriate regimen.

2. *Prurigo senilis vel pedicularis* scarcely differs from the preceding varieties as regards the papulæ; they are merely a little less raised, more flattened, and less numerous. The dryness of the skin, which is merely accidental in prurigo formicans, is a specific character of prurigo senilis; but the leading distinction is the swarm of insects with which the skin is infested in the latter affection. It most commonly attacks old people. Biett, however, observed it

in a young woman immediately after child-birth. Nevertheless it almost invariably occurs in debilitated persons in the decline of life.

Old people of strong constitutions are seldom attacked. The skin becomes brown, its functions are disordered, and it is covered with pediculi, which are multiplied and reproduced with surprising rapidity. The insects are generally of the genus *pediculus*, but those of the genus *pulex* have been seen by Willan. The presence of these insects is sufficient to prevent prurigo senilis from being confounded with any other affection. It is a severe disease, and is often incurable. The remedial measures already pointed out are also appropriate for this variety; but the sulphur baths should be used more freely. Cinnabar fumigation is by far the most effectual remedy; it destroys the pediculi in a very short time, and is much preferable to mercurial friction. The general health of the patient should be recruited with tonics, the preparations of iron, &c., and the utmost cleanliness should be observed.

Local Varieties.

Several local varieties have been described, in which it is very difficult to distinguish the papulæ, but they are evidently allied to prurigo by the intense itching which accompanies them. The pruritus may be confined to a small surface, and constitute certain varieties, of which the most important are prurigo genitalium, and prurigo podicis.

Prurigo genitalium occurs on the scrotum in men, and on the pudendum in females, and may in both cases spread to the neighbouring parts. It often extends to the vagina, producing nymphomania. It may co-exist with prurigo podicis. When it occurs in men, an exudation of sebaceous matter takes place. In general there are no papulæ present, but in some rare cases very slight papular elevations may be detected by the finger. The skin of the scrotum becomes brown and sometimes thickened; there is always an intolerable itching, which exacerbates, and the patients scratch and tear themselves in the vain attempt to obtain relief.

When it occurs in females, it is still more distressing. It frequently excites Onanism, voluptuous desires, and violent nympho-

mania. Biett observed a case of this kind in a woman sixty years of age. He examined the parts with a lens, and could not discover any lesion. Nevertheless, this female was excessively addicted to self-pollution. The disease commenced with slight itching of the genitals, which became gradually augmented, until it assumed the character of nymphomania. The patient frequently fainted on seeing young men.* The intense burning pruritus, and the absence of vesicles, distinguish this affection from certain varieties of eczema which are developed in the same region, and accompanied with itching. Prurigo genitalium often occurs without any appreciable cause. The rubbing of the under garments against the parts, violent exercise in warm weather, and the general causes of prurigo, may influence the development of this distressing complaint. It is sometimes the result of leucorrhœa when long continued, and it also frequently occurs at the critical period.

Prurigo podicis differs from the preceding variety merely in its seat. It most frequently appears in persons of sedentary habits. It is often an accompaniment of hæmorrhoids, ascarides in the rectum, or chronic inflammation of that intestine. The patient experiences an intolerable itching about the sphincter of the rectum, which extends upwards in the gut for some short distance, and is always increased towards evening, and after a hearty meal.

These local varieties of prurigo are sometimes exceedingly severe complaints. They are always very rebellious, and it requires considerable tact and attention to allay the itching. Sometimes it yields to the application of leeches round the parts, together with emollient, cold, and narcotic lotions, and afterwards the alkaline and sulphureous water baths. Sulphur and cinnabar fumigations are also often very useful in these cases. Biett invented an apparatus by which the vapour of sulphur and mercury can be applied to the diseased part alone, which is in daily use at the Hospital of St. Louis. It has this advantage, that the rest of the body is preserved from the immediate contact of these vapours, and from the debility

[* To this disease are doubtless to be attributed those frightful cases of female depravity recorded in history by Pliny and Livy. The conduct of Theodora, and especially of Messalina, of whom the Roman historian says, "Et lassata viris, necdum satiata, recessit!" can only be attributed to insanity or disease.—B.]

which must necessarily ensue. However, notwithstanding the employment of these several remedies, prurigo genitalium has often continued for six months and longer. We have known it continue for years. It often subsides for a certain period, and then reappears in its original form and intensity.

[The worst cases of this most inveterate disease occur in men in the decline of life, after the grand climacteric, and in females of a nervous, irritable habit, suffering from menstrual disorder of long standing. It is one of the most distressing of all the diseases of the skin which occur in this country, for the mind as well as the body suffers, and suicidal feelings often arise during the paroxysms. Among the constitutional remedies, sarsaparilla is a favourite one; but I have never found it of any use in this or any other cutaneous affection. Iodide of potassium is sometimes useful as an alterative, preparatory to the employment of more active remedies, and strict attention to diet. The tincture of aconite, and arsenic, are the medicinal agents on which most reliance may be placed; and the anæsthetic effects of chloroform may also be turned to good account in the treatment, during the paroxysms of prurigo. Dr. Graves recommends the following liniment as one of the best local applications:

℞ Acetate of lead, ʒj.
Wine-vinegar and water, āā ℥ij.

Rubbed up with a sufficient quantity of olive oil to make a liniment: to be shaken when used.

Dr. Simpson says that brushing the diseased parts, in severe and distressing cases of prurigo of the cervix uteri, vagina, and vulva, with hydrocyanic acid, of the strength given in the Edin. Pharm., will often give the greatest relief. Dr. Meigs, of Philadelphia, recommends a solution of borax in rose water, with a small proportion of sulphate of morphia, to be applied by means of a sponge. The general and local remedies described in the treatment of lichen may also be tried in this disease.—B.] (*See next page.*)

HYPERÆSTHESIA.

Pathology of Lichen and Prurigo.

[The papular eruptions of Willan, which Alibert very properly reduced to the single génus prurigo, are, I feel convinced, true *neuroses* of the skin. No doubt the sebaceous glands, hair follicles, and sweat ducts, may become finally involved, but the lesions of these structures are *secondary;* the primary disorder, so far as the skin is concerned, residing in the *cutaneous nerves*, which, in its turn, is often the result of sympathy with a disordered condition of one or other of the mucous surfaces.

A variety of the dry form of *eczema* is very commonly indeed mistaken for the papular disease, and treated accordingly; hence, in great measure, the difficulty so generally complained of, of arresting the progress of that troublesome complaint. Eczema being a purely inflammatory lesion involving the whole structure of the cutis, must necessarily demand a different method of treatment to a disease which is not the result of inflammation, and in which only one of the tissues (the nervous) comprising the cutaneous envelope is mainly and primarily implicated. In accordance with this view of the elementary nature of the papular diseases of the skin, I have been lately in the habit of prescribing strychnia and phosphorus in those distressing cases of prurigo which reduce the unhappy patient to the most abject state of human suffering, and too often baffle the usual methods of treatment prescribed in works on cutaneous pathology. In several cases of this kind, and after the acids, alkalies, and arsenic internally; and hydrocyanic and acetic acids in the form of lotion, had utterly failed to subdue the unceasing pruritus, I have found the phosphorated ether to succeed, given internally, and preceded for a day or two by repeated doses of the tincture of hyoscyamus.

In the prurigo of old age, I have also seen it succeed in allaying the tormenting itching and tingling, after the usual remedies had failed. Can it be a revivifying effect which phosphorus produces on the nervous centres that causes this alleviation of the pruritus? As the proportion of phosphorus in the young and healthy human

brain is considerable, being from eight to eighteen parts in one thousand of the whole mass, or from one-twentieth to one-thirtieth of the whole solid matter; and as it is unusually deficient in idiots and in extreme old age, the loss of so necessary an ingredient of the nervous mass may occasion the irritation in the peripheral nerves which constitutes prurigo senilis. This is evidently a lesion of innervation, associated with decrepitude, and a sure indication of the gradual disintegration of those structures and functions through whose combined agency the process of life is carried on.

But why should there not be *neuroses* of the organ of touch, or of the skin, as well as of the organs of sight, hearing, smell, and taste? It is not because the "hallucinations of the sense of touch," as the French pathologists call those morbid conditions of the skin which come under the heads of *hyperæsthesia*, and *anæsthesia*, are so difficult of explanation, that we are to deny their existence. There is no doubt but several of those cutaneous disorders which we have been accustomed to regard as the result of inflammation, in consequence of placing an undue reliance on their *secondary* products, as a means of diagnosis, are in reality lesions of the cutaneous nerves, producing exaltation, or other modification in the sensibility of the skin.

A young woman, aged 26, placed herself under my care suffering from a distressing pruritus, which tormented her day and night. She had been afflicted with the disease nine months previously, and for three or four months at a time she could not sleep in her bed, being obliged to pass the night on the sofa with her clothes on, from which she was frequently obliged to rise and walk about the room to seek relief from the itching. The disease was situated principally on the lower extremities, whence it extended to the pudendum. It appeared in paroxysms, which were in general preceded by a tingling sensation in the parts. There was no eruption or lesion of any kind to be seen on the skin between the paroxysms, except those produced by the finger nails during the attack, in the attempts to get momentary relief. The patient could not resist the desire to scratch the parts until the skin became lacerated, although fully aware that by so doing she only aggravated the evil, and rendered the parts so painfully sensitive that she could not bear her clothes to touch them.

This patient had been treated at different times during the period she was suffering from the disease, for stomach complaint, disorder of the womb, and nettle rash, which were indifferently supposed to have been the causes of the cutaneous affection. There was little or no relief obtained from the treatment pursued, and in one instance an aggravation of all the symptoms was occasioned by the application of Fuller's earth to the diseased surface. I prescribed the mineral acids, alkalies, with occasional doses of morphia, with, however, only temporary benefit. Seeing that the disease was decidedly paroxysmal, and that there were intervals distinctly marked between the exacerbations, when there was no pain and nothing to be seen but the scratches before mentioned, and not being aware of any *inflammatory* lesion presenting those characters, I treated the disease as neuralgia involving the peripheral nerves, and accordingly prescribed strychnia—the sixtieth part of a grain twice a day to begin with, which was soon increased to a sixteenth of a grain. The patient, at the commencement of the treatment, took occasional doses of the tincture of henbane, but no external agents were had recourse to, further than the ordinary measures of cleanliness. In the course of three or four weeks this patient was so far improved in her health that she could sleep soundly, and in her bed, relish and digest her food well, and perform the ordinary avocations, without being interrupted by her old and tormenting disease.

The following case occurred in the Hospital of St. Louis, under the care of M. Cazenave, and will serve to support my view :—

A. M. entered the Hospital of St. Louis on the 7th of February, suffering from a papular affection of the skin, accompanied by severe itching. He was a native of Bordeaux, and was treated in that city for a syphilitic complaint of which the cutaneous affection was supposed to be the result, although one of the leading characters of the *syphilides* is that they are never accompanied by pruritus. On admission, the sensibility of the cutaneous envelope, with the exception of that part covering the head and feet, was very acute. In the lumbar region it was actual pain. The lower extremities were the parts which suffered most, and the disease would pass with remarkable facility from one limb to another, or abandon those regions altogether, and suddenly appear on the back, chest, and shoulders. The characters of the disease were liable to capricious

change. The exalted sensibility and pain were not continuous, but appeared in the form of exacerbations or paroxysms, in the following manner:—

During certain intervals neither pain, itching, nor any appreciable lesion could be detected. Then, all of a sudden, and without any apparent cause, a sensation of burning heat was developed in the skin along the inner aspect of the thighs, on the chest, shoulders, &c. At the commencement of the attack, the sensation in the skin is either that of burning, or like the peculiar smarting of a recent wound; but it invariably terminated in acute pain. When the hand was applied firmly to the morbid surface, the pain was at once appeased; on the contrary when the skin was only slightly touched it became intense; and when the hairs were merely rubbed backwards, or against the grain, the sensibility became so exaggerated that cramps and spasmodic contractions of the limb ensued. The simple contact of the wearing apparel became insupportable. The patient was obliged to avoid carefully the contact of flannel, and to abstain from all exercise or excitement of any kind. The return of the attack was not always regular, but generally it commenced in the evening, and lasted during the first half of the night; the pain then ceased, and the patient was enabled to sleep until morning. Shortly after getting up, however, it would again appear, and continue for several hours, then subside as before. Some days the paroxysms were much milder.

The appearance of the skin was not in accordance with the intensity of the malady; for although the patient described a kind of eruption resembling urticaria as having manifested itself during the early period of his complaint, nothing could now be seen on any part of the skin, except a few pimples of lichen on the lower extremities, but they were so few in number that their presence did not explain the remarkable state of nervous exaltation in the cutaneous envelope generally. But the skin was not the only structure whose sensibility was thus excited. The mucous membrane, in several places, was singularly affected. That of the nasal fossæ was disagreeably excited by certain odours, especially those of vinegar, acids, cheese, &c. The taste of salt in the mouth produced actual spasm, and the mucous membrane of the stomach was easily irritated by different kinds of food. M. Cazenave considered the

disease to be purely nervous, and proposed to treat it by administering quinine as an antiperiodic, in the first instance, and subsequently the preparations of arsenic. Cephalalgia, vertigo, loss of appetite, followed the administration of the quinine, which soon subsided, however; but although this remedy was persisted in for ten days it produced little or no amelioration of the symptoms of the disease. It was consequently suspended, and Pearson's solution of arsenic prescribed. Although the arsenic was given in very small doses, so great was the morbid sensibility of the gastric mucous membrane, the patient complained next day of a painful burning sensation along the œsophagus, down to the stomach. The medicine was at once suspended, and recommenced in a day or two, after which it was borne much easier. Under this treatment the symptoms were gradually subsiding, when the patient was obliged to leave the hospital.

This well-marked case of hyperæsthesia of the skin goes to support the view I have taken of the pathology of the prurigenous affections. Indeed, as I have already observed, I feel convinced, from repeated observations of those cases, that the commonly received papular eruptions of the skin are merely accessory conditions or symptoms of true neuroses of that structure; the turgescence of the papillæ, and the structural alterations involved in it, being merely secondary lesions.—B.]

SQUAMÆ.

Scaly Eruptions.

This order comprehends certain chronic diseases of the skin, characterised by the formation of inorganic laminated scales of a greyish-white colour, dry, friable, more or less adherent, and of various degrees of density. These whitish lamellæ of the cuticle are called *squamæ;* they are always elevated above the skin, which remains red and inflamed after they fall off. They are the result of a morbid secretion of the epidermis, and are very different from those vesicular incrustations already spoken of, which depend on the concretion of a serous or sero-purulent fluid. The squamous diseases are essentially chronic in their nature; they are in general very slowly developed, but sometimes they run on rapidly, and the eruption is completed in two or three days. Their duration varies from a few months to several years.

Symptoms.—They generally commence with a few red, slightly-elevated, and distinct patches. Sometimes these spots unite and become confounded together, and are speedily covered with laminated scales. The formation of the eruption is rarely attended with constitutional disturbance. Indeed, the patient is frequently not aware of the existence of the disease until the patches are fully formed, or the cuticle is on the point of being detached.

The squamous eruptions occur most frequently on the limbs; however, they are also met with on the head and trunk. Sometimes the patches are distinct, scattered here and there, and are limited in number, but they are often diffused over the whole extremity, and form a kind of general envelope. The lamellæ present some difference of formation, according to the variety to which they belong: thus, for instance, they are often thin and flimsy, as if composed of one or two layers of the cuticle, which become dry and whitish, and are detached with much facility, and in great abundance; in other in-

stances they are firm and adherent, and consist of hypertrophied portions of the epidermis. The long list of symptoms described by authors is rarely met with; a slight degree of heat and itching are the most usual concomitants. When the disease occurs in the vicinity of the joints, the movements of the latter are stiff and painful; and if the eruption is of long standing, the skin becomes indurated and thickened.

Causes.—None of this class of diseases are contagious. They are sometimes hereditary, and one of them (*ichthyosis*) is most frequently a congenital affection. They are not confined to any classes of society, to any age, or to either sex; but they generally occur in adults. They appear in the rich as well as in the poor, and are supposed to prevail more frequently in autumn than in any other season, if there is really any difference.

Diagnosis.—The diseases belonging to this class cannot be mistaken for any other cutaneous disorders. The presence of the laminated scales is alone sufficient to distinguish them. The vesicular, pustular, and papular incrustations and scales are very different in formation and appearance from true squamæ; besides, the presence of vesicles, of pustules, or of papulæ in the neighbourhood of the eruption, which can always be detected with a little attention, will at once indicate their real nature. They are never attended with the formation of the thin, dry, micaceous-looking scales peculiar to the squamæ. These diseases are never dangerous, but are always rebellious, and require an energetic plan of treatment. This order contains four species—lepra, psoriasis, pityriasis, and ichthyosis. Although some writers have objected to the latter affection being included amongst the squamous diseases, we shall describe it, along with Willan, as belonging to that class.

LEPRA.

SYN.—*Lepra vulgaris; Psoriasis circinata; Dartre furfuracée arrondie;* Scaly leprosy.

The Arabians considered elephantiasis as synonymous with *lepra*, (λέπρα,) a term which they used indiscriminately for all severe and obstinate diseases of the skin, however different they might be from each other in their elementary characters. Medical writers are now,

however, agreed in designating by the word lepra a squamous affection of the skin, characterised by circular scaly patches, with elevated borders and depressed centre, and which may run together and form a continuous patch.

Willan has described two varieties of this disease, *lepra alphoides* and *lepra nigricans*, which, as we do not intend to describe separately, we shall simply mention here. The first, which occurs chiefly in children and debilitated subjects, differs from lepra vulgaris merely by the smaller size and paler colour of its patches. The other is an exceedingly rare affection, of the nature of which we possess little positive information. We believe it to be in the majority of instances a variety of syphilis. We have, however, seen two cases in Biett's ward, that were decidedly not syphilitic.

Symptoms.—Although lepra may appear on every part of the body, the limbs, the neighbourhood of the joints, particularly the knees and elbows, appear to be the special seats of the disease; at least it is in these regions it generally commences, in the form of small, red, scarcely-perceptible spots, slightly elevated above the level of the skin. These patches, which are smooth and shining at first, are soon covered with a very thin lamella which is not long in falling off. They gradually increase, always preserving their circular form; the scales are renewed and become thicker, especially at the circumference, which is elevated above the rest, at the same time the centre remains intact, if we except some rare cases in which one or two isolated patches are covered all over with the squamous crusts.

These patches are sometimes several inches in circumference, but generally smaller. They usually vary, however, in size, from that of a shilling to that of a crown-piece. The centre is depressed and of the natural colour, whilst the borders are covered with an imbricated layer of whitish adherent scales. The annular patches are not always entire and distinct; they often become intermixed and confounded with each other, especially about the joints, as the knees and elbows; and it is in consequence of this that some authors have alleged there is no distinction between lepra and psoriasis, but that, in point of fact, they are one and the same disease. With a due regard to accuracy, these affections cannot be described as one. Lepra vulgaris and psoriasis are much more distinct from one another than

herpes zoster from herpes phlyctenodes; wherefore we shall still continue to describe them separately.*

Whilst the scales are thus individually increasing in diameter, the eruption is becoming more general, and extending progressively to the abdomen, back, shoulders, chest, sometimes to the scalp and forehead, but rarely to the face or hands. The scales fall off and are renewed incessantly. Their bases are red, slightly inflamed, smooth when the eruption is recent, but furrowed and wrinkled when of long standing. These are the characters exhibited by lepra in the generality of cases; but it sometimes appears with very different and very remarkable symptoms. Thus, for example, the eruption, deviating from its ordinary course, appears in the form of small red circular points, which unite at their edges, and by their eccentric arrangement then acquire an enormous size, and the patches are not covered with scales, or if they happen to be so, and fall off, they are never renewed. We have observed several patients at the Hospital of St. Louis, in whom this variety was well illustrated.

The trunk, and particularly the back, was the seat of broad red patches, more than a foot in circumference. These patches were formed by a prominent circular ring but a few lines broad, accompanied on both its edges by a reddish border, also but a few lines in breadth, and quite free in every part from scales. Sometimes two or three of these circular rings extended over the whole of the back; and even, in some cases, there was only one large ring. We have observed that in other localities, as the limbs, the patches were developed in the ordinary manner, and pursued the ordinary course of the disease, as above described.

Lepra may exist for a long period without occasioning any bad symptoms, unless the vital functions become altered; but it generally produces a stiffness about the joints, the movements of which cannot be accomplished, frequently, without considerable pain. The ulcerations and cicatrices, which sometimes form are the result of some severe complication; they do not belong to this disease,

[* Notwithstanding M. Cazenave's great experience, I feel convinced that lepra and psoriasis are fundamentally the same disease, as well as glanders and farcy are, having the same anatomical seat, and requiring the same treatment.—B.]

properly speaking. If left to itself, lepra may disappear and return quickly again, or it may continue for a long period, and require very energetic treatment. However, from whatever cause it subsides, its cure is always slow and protracted. The patches first begin to fade in the centre, the scales diminish in number, they cease to be renewed, and the process of cure invariably proceeds from the centre to the circumference. The circular rings break in many places, the raised borders sink, and the patches finally disappear. In that variety, where the disease manifests itself in the form of those large red circles without scales, above described, the morbid surfaces become much more inflamed immediately before disappearing, the raised edges then quickly fade, and some portions are here and there reduced to the level of the skin; the colour also fades, and there only remains a slight erythema, which is not long in disappearing.

Causes.—Lepra is not contagious; it appears in all seasons, but most frequently in autumn. Men are more frequently affected than women, while women, on the contrary, are more liable to some forms of psoriasis, especially *psoriasis guttata;* children are seldom attacked. The causes of lepra are but little known. It may be produced by a cold and damp atmosphere. It frequently supervenes soon after partaking of salt food and sea fish. Certain professions predispose to the disease; for instance, those who are daily in the habit of handling, and being otherwise in contact with pulverulent substances, metallic dust, &c., are very liable to it. It results more frequently from strong mental emotions than from any other causes. Thus, it is by no means uncommon for lepra vulgaris to supervene after violent fits of passion, grief, or fright. It may also be hereditary.

Diagnosis.—The diagnosis of lepra is ordinarily very easy, and the slightest attention will enable the observer to distinguish it from all other diseases. We shall, however, recapitulate the peculiar characters which distinguish it from certain cutaneous affections with which it has been sometimes confounded.

1. *Porrigo scutulata*, (*ringworm*,) at certain periods of its progress, either at the commencement or at the end, when the crusts fall off and leave behind red annular-shaped patches, may for a moment be mistaken for lepra of the scalp, especially if there are patches on

other parts of the body at the same time. But porrigo scutulata occurs as seldom on the trunk and limbs as lepra appears on the scalp; and besides, the elementary characters of the former—favous pustules—which are always present in the neighbourhood of the rings, will at once indicate the true nature of the disease. The appearance of the scabs, the destruction of the hair, and the contagious character of porrigo scutulata, will prevent the possibility of these two affections being confounded with one another.

2. *Syphilis.* The circular form of the patches of tubercular syphilis on the forehead and back sometimes resemble those of lepra. But the coppery and violet colour, and the cicatrices which are always present in the neighbourhood of the eruption in the former case, together with other concomitant symptoms, will readily distinguish it. Moreover, if the patches are carefully examined, they will be found, not perfectly continuous circles, but isolated tubercles, arranged in an annular form, and having distinct intervals between them. They are smooth and shining, and are not covered with scales, unless in some rare cases, and then the lamellæ are extremely hard and thin, and cover only a part of the circumscribed induration. Sometimes, when the tubercles begin to dissolve, and are less prominent than in their earlier stages, they may be mistaken for leprous rings in the act of healing. A knowledge of the distinctive characters of each disease, as above described, will obviate this error.

3. If we compare lepra with the irregular patches of psoriasis, the only affection of the same order with which it can for an instant be confounded, we may see at a glance the marked distinction that exists between them. There is, however, one variety of the latter disease, psoriasis guttata, characterised by isolated patches, which it is difficult to distinguish from lepra, during the process of cure. The patches of psoriasis guttata are always smaller and more irregular than those of lepra, and their centres are never round nor depressed like those of lepra; and even during the process of cure, when a portion of the circular rings of lepra disappears, that which remains will always suffice to distinguish the disease. Finally, when the patches of the latter affection become agglomerated and run into one another, there are always some portions of the rings distinctly visible, either in the neighbourhood, or even

in the centre of the diffused patches, or on other parts of the body, which will leave no doubt as to the nature of the eruption.

Prognosis.—Lepra is never attended with danger, but it is always a very rebellious, and is frequently an incurable, disease.

Treatment.—The treatment of lepra consists in external, internal, and hygienic measures; but before adopting any plan of treatment the age and strength of the patient, and the state of the eruption, should be carefully considered. When the patient is young and vigorous, and the disease has pursued a rapid course, at the same time that the skin is red and inflamed, and the pulse full and quick, venesection, simple baths, diluents, strict regimen, and quiet, will be necessary. In old and feeble patients, and those whose constitutions are broken down by excess or by privation, in whom the eruption is never attended with inflammation, it will be advisable to administer a course of tonics, in order to invigorate the health, with the view of having recourse to more energetic measures at a later period. If these precautionary measures are attended to, the disease may then be vigorously attacked, both externally and internally.

The external agents, when employed alone, are generally inefficacious, and are sometimes even attended with inconvenience. We shall not enumerate the various irritating applications employed by the ancients in this disease. They should in our opinion be rejected, together with blisters and cauterization, from the treatment of lepra. With regard to external remedies, we have frequently seen the application of a gently stimulating ointment, no matter of what kind, attended with the greatest success. But here an important question presents itself for consideration, namely, whether is an external or internal plan of treatment the most appropriate for lepra? Our own experience, and also that of Biett, goes to prove the inefficacy of the former whenever employed alone. In nineteen cases out of twenty the external applications produce merely a momentary amelioration of the complaint. We have often observed the disease return in less than fifteen days after being *cured* by some of the supposed infallible ointments.

External applications are, however, useful auxiliaries during the internal treatment, especially towards the decline of the eruption. They should not be employed alone unless in very rare cases, when the disease is recent, and confined within a small compass. Amongst

those which we have seen attended with the most advantage at the Hospital of St. Louis, in lepra as well as in other cutaneous diseases, we may mention an ointment composed of the iodide of sulphur in the proportion of twelve to fifteen grains to an ounce of lard; the sulphur may be increased to half a drachm. This should be rubbed over a certain number of the patches morning and evening. It stimulates the skin gradually into a certain degree of inflammation, when the squamæ are thrown off, and their elevated borders sink and fade. In the course of a few days the skin is restored to its natural colour, and then other patches ought to be treated in the same manner. Tar ointment also produces a rapid, but temporary disappearance of the eruption. The patient should continue to take some bitter infusion,—dulcamara, mezereon, &c.,—while the ointment is being employed.

Baths are also very useful adjuvants towards the cure of lepra, especially sulphur and salt water baths, which undoubtedly modify and alter the progress and condition of the eruption. The vapour bath, however, excels all the others as a local application. It increases the circulation, stimulates the skin into more healthy action, detaches the scales, and bedews even the diseased parts with a gentle perspiration. The sulphur fumigations are by no means so efficacious as some writers would have us believe. In the majority of cases they produce merely a transient modification of the disease. It is a fallacy to say that lepra can be cured by external remedies alone, which are often not only useless but even injurious. We must have recourse to internal treatment to remove this disease effectually. Amongst the internal remedies which have sometimes proved serviceable, we may mention the decoctions of dulcamara, much extolled by Carrére and Crighton; of mezereon, and ormis pyramidalis bark, the watery extract of white hellebore, rhus radicans, rhus toxicodendron, &c.; their virtues, however, are very uncertain. Biett has not found the dulcamara attended with such good results as those who first recommended it. Sulphur appears to be in some cases a useful auxiliary. The sulphuret of antimony is always unsuccessful. Mercury in the metallic state, and in the form of the bichloride, has not been more efficacious. Calomel alone has often succeeded, but it seemed to act as a purgative. Pitch or tar has invariably failed.

The result of Biett's experience at the Hospital of St. Louis goes to prove that the most successful internal treatment consists in the exhibition of tincture of cantharides, and the different preparations of arsenic.*

1. The tincture of cantharides is more useful in cases where the disease has reappeared without any evident cause, when it is diffused, and has resisted the action of purgatives, and when it occurs in subjects of a soft and lymphatic constitution. It ought to be prescribed in doses of from three to five minims every morning in a little water, and the dietetic regimen should be at the same time severe. The effects of the medicine ought to be carefully watched, and if it does not produce any irritation of the digestive or genito-urinary organs, the dose may be increased five drops every six or eight days. If, however, it produces heat at the epigastrium, nausea, vomiting, *ardor urinæ*, erection of the penis, &c., circumstances which rarely occur, the medicine should be suspended immediately; but when administered with caution, and by gradually increasing the dose, the latter may be extended to twenty-five or thirty drops and beyond, without occasioning any evil result. It generally effects a cure, especially in females, in the course of forty-five to fifty days, and we have seen a case of lepra at the Hospital of St. Louis, of eighteen years' standing, disappear in the course of a month under the influence of this remedy.

2. Arsenical preparations must be had recourse to if the disease resists all the remedies already enumerated, when it is of several years' standing, and diffused over a large surface of the body, when the skin is thickened, and its condition otherwise altered. They often have a most surprising effect even after all other remedies have failed. The preparations of arsenic commonly used are Pearson's and Fowler's solutions, and if the proper precautions be observed, these are invaluable remedies, and no more dangerous than any others. Pearson's solution, the mildest form in which arsenic can be given, should be prescribed in doses of a scruple to half a drachm or a drachm; and Fowler's solution, which is much more active, is to be given in doses of three drops to begin with, every

[* In the former French editions, a course of purgatives was recommended in the treatment of lepra, which has been very properly omitted in the last edition.]

morning fasting, which may be increased two or three drops every five or six days until twelve or fifteen drops are taken daily; but it should never exceed this, and, like the tincture of cantharides, it will be desirable to suspend its use from time to time, and when employed again, we should begin with the smallest doses mentioned. Sometimes, when Pearson's solution fails, that of Fowler will be attended with success. Should any symptoms of gastro-intestinal inflammation supervene, it will be necessary to suspend at once the employment of both these remedies; but at the same time care should be taken that there are good grounds for depriving the patient of the salutary effects of such valuable remedies. The preparations of arsenic are, no doubt, very dangerous remedies in unskilful and incautious hands; but administered with tact, and attention to the precautionary measures, they will not produce any ill effects; on the contrary, they will be of incalculable service in promoting the cure of the disease. When first administered, they usually stimulate the morbid parts into greater activity. The patches become less insensible, the centres heal, and the circular rim breaks down and gradually fades, so that in the course of a few months, sometimes less, a severe and inveterate disease, which has existed for years, may vanish under the judicious employment of the above-mentioned preparations of arsenic.

Hygienic measures are very serviceable as adjuvants, especially in preventing a return of the disease. The diet of the patient should be restricted, the use of ardent spirits strictly prohibited, and the causes of the disease, if possible, avoided. The trade or vocation of the individual often exercises much influence on the development of the eruption, in the event of which it will be necessary to give it up, at least for a period.

[Lepra and psoriasis are often associated with gout and rheumatism; indeed, there seems to be an affinity between these maladies, of a more intimate character than is generally supposed. I have seen cases of lepra of a very inveterate character, resist all the usual treatment in such cases, including the preparations of arsenic, and yield to the tincture of colchicum and liquor potassæ, although there was no appearance of gout or rheumatism present at the time. The urine should always be examined during the treatment of the

squamous eruptions, and the practitioner will be surprised to find how frequently evidences of the gouty diathesis will be revealed by that secretion when the skin is covered with the scales of leprosy or of psoriasis. Venesection or leeching are seldom necessary in any form of lepra, and purgatives, which were formerly freely employed in the treatment of this disease, are now discarded—an occasional aperient, to keep the bowels gently open, being all that is required of this class of drugs. In the last French edition of this Manual, M. Cazenave has omitted the paragraph recommending their use, which was retained in all the previous editions.

A restricted diet, of a farinaceous kind, should be prescribed during the treatment; total abstinence from salt meat or fish, spices, wines, malt liquor, or spirits, should be insisted on. Careful attention to these preliminaries will materially assist the curative treatment. Next in importance is the free and frequent use of the warm bath, from 96° to 98° Fahr.; the patient to remain in the bath at least forty minutes each time. Of the internal remedies, the iodide and biniodide of arsenic, will be found useful in obstinate cases. The former, in the dose of one-tenth of a grain three times a day, which may be increased to a quarter of a grain. The dose of the latter would be the eighteenth of a grain. These may be alternated with the tincture of cantharides. The iodine appears to act on the absorbent system, while the arsenic alters the vitality of the skin.

But the preparation of arsenic which I have found most useful is Donovan's solution of iodine, arsenic, and mercury (the *liquor hydriodatis, arsenici, et hydrargyri.*) The dose which I commence with is ten drops three times a day, and this I have found to answer best in the majority of cases. Mr. Donovan recommends it to be used in much larger doses—from twenty drops to half a drachm, three times a day. This is a most powerful remedy, and its effects require to be closely watched at the commencement, for it may have to be suspended immediately, from its causing irritation of the stomach and bowels; but with ordinary care and attention these unpleasant symptoms may be avoided, and when it is not contra-indicated, it will be found a most efficacious remedy in inveterate cases of lepra and psoriasis. The peculiarity of the scaly diseases is that they are always liable to return, and this tendency cannot be prevented by any plan of treatment, no more than that of gout or rheumatism.

For the external treatment, a variety of ointments have been recommended—as the citrine, creasote, tar, iodide of sulphur ointments, and the naphthaline ointment by M. Emery (ʒj or ʒij to ℥j of cerate). When psoriasis or lepra are confined to the legs, the best local application is fumigation with cinnabar or flowers of sulphur, as employed by Alibert, and subsequently by Biett, who had an apparatus constructed for the purpose at the Hospital of St. Louis. They also used the same agent in cases of chronic lichen of the extremities. For some time after the disappearance of the eruption from the skin, the diet should be carefully attended to, and the articles above indicated avoided, to prevent an immediate relapse; for errors in diet will thwart the most judicious treatment, and undo in a few days the work of months. The warm bath should also be continued.—B.]

PSORIASIS.

SYN. —*Psora leprosa; Dartre écailleuse; Dartre squameuse lichenoid.*

Psoriasis is a chronic inflammatory cutaneous disease, characterized by patches of various extent, irregularly formed, slightly raised above the level of the skin, and covered with thin dry white scales. There are several distinct varieties of psoriasis, depending either on the degree of intensity, or on the situation they occupy. In one variety the patches are distinct, small, and scattered; in another they are larger, confounded together, and irregular; in a third they are still more extended, and form one continuous surface; and in a fourth they appear twisted or in lines. Hence the names, *Psoriasis guttata, diffusa, inveterata, gyrata.*

1. *Psoriasis guttata* is a mild form of the disease, and appears to be an intermediate affection between lepra and psoriasis. It is characterized by small red distinct patches, irregularly rounded, raised at the centre, covered with thin white scales, and seldom exceeding two or three lines in circumference. It usually appears first in the form of small, distinct, red points, in the centre of which a very thin scale soon appears. The patches always remain isolated, and the interstices between them are sound, and retain the

natural colour of the skin. Their appearance is that of large drops of fluid, scattered over the surfaces on which they are seen. The scales are more or less adherent, and on falling off, leave bright red, slightly-painful, and prominent patches. This variety may be met with on every part of the body, but most frequently on the back, and on the external aspects of the limbs. It is rarely accompanied by febrile symptoms; but the heat of the bed towards evening, and in the night, occasions a slight degree of itching, and the scales, when scratched off, or when they desquamate naturally, are quickly reproduced. It appears most frequently during spring and autumn, and disappears in summer or in winter. This is not a rare variety of the disease, nor is it very severe. It occurs oftener in adults than in children or old people. It sometimes co-exists with one of the other forms of psoriasis.

2. *Psoriasis diffusa* occurs in the form of flat, angular, irregular, and larger patches than the foregoing. They are at first red, papulæ-form, and distinct; they speedily unite and form continuous surfaces, covered with thick, whitish, and pretty adherent scaly incrustations. Although it may appear on every part of the body, the limbs are much more frequently affected than any other part. It is by no means uncommon to see one continuous patch covering the whole of the anterior surface of the leg, or the posterior aspect of the fore-arm. The elbows and knees are constantly affected; and even when it has disappeared from any other part of the body, it will remain fixed in these regions, from which it will be difficult to remove it. In some rare cases the disease appears simultaneously on different parts of the body. We have seen cases, at the Hospital of St. Louis, in which it covered the greater part of the back, abdomen, and both arms, spreading down to the fingers, which were incased as with a glove. Beneath these scales, the surface is very red and polished.

Psoriasis diffusa is generally preceded by slight constitutional disturbance, together with a troublesome severe itching, which, however, soon subsides, and disappears when the eruption is developed. In some cases the patches are not inflamed, and the patient merely complains of slight formication; but in a few rare instances there is considerable inflammation present; the patches are prominent and the scales thick, and painful fissures and chaps

are established, which annoy the patient considerably. Psoriasis diffusa generally attacks adults; nevertheless, it sometimes occurs in young children, (*Psoriasis infantilis*, Willan,) and its progress in those cases is often remarkably rapid. It is always a severe and intractable disease; lasting, frequently, for months, and even for years.

3. *Psoriasis inveterata* is the same affection as the foregoing, but of a more severe form. It occurs most frequently in aged persons, and in broken-down constitutions, and often attains a high degree of intensity. The skin becomes thick, hard, and hypertrophied; it is split in different directions, and the scales are no longer of the usual size and thickness, but a sort of furfuraceous desquamation takes place, which fills up the furrows or fissures, and is readily detached. Sometimes, in these cases, the morbid surfaces are entirely deprived of scales, and are red, slightly inflamed, and furrowed in every direction. On pinching up the skin between the fingers, it is found to be deeply altered, and feels rough, hard, and uneven. The eruption is sometimes confined to the limbs; in other instances it spreads over the whole body; and in some rare cases the patient seems as if incased in a scaly envelope. The slightest movement of the joints produces deep, bleeding, and painful fissures. The nails are also affected; and are misshapen, rough, and ragged; they split into pieces, and are replaced by misshapen, scaly incrustations. This variety is occasionally complicated with inflammation of the mucous membranes, particularly of the intestinal canal, but this never occurs in young and vigorous subjects. This is the most severe form of psoriasis.

4. *Psoriasis gyrata* is a very rare variety of the disease, for which lepra and some syphilitic eruptions have been often mistaken. It consists in long, narrow, tortuous, or spiral-formed stripes, resembling worms; and sometimes bending into rings, occurring generally on the back. Biett had seen a few cases of this kind amongst the external patients at the Hospital of St. Louis. We have observed many intermediate forms of the disease between the four varieties now described, which, with one remarkable exception, we shall pass over for the present. We have occasionally observed, in young persons of fair complexion and fine delicate skin, irregularly-rounded patches, the borders or centre of which were not raised. The circular patches were almost always distinct, flattened,

and about the size of a crown-piece, covered with thin, slight scales, which adhered gently to a rose-coloured and slightly inflamed base. It occurred most frequently on the legs and arms.

Local Varieties of Psoriasis.

There are some more essentially-local varieties of the disease, which present several peculiarities worthy attention.

1. *Psoriasis ophthalmica* appears sometimes in small squamous patches, seated about the angles of the eyes and on the eyelids, which are swollen, tender, and painful, especially when moved. Although it may be accompanied with an analogous eruption on the face, it often occurs alone, particularly in children. It often occasions a smart itching, and spreads to the conjunctivæ when the disease is very obstinate.

2. *Psoriasis labialis* occurs generally alone. It appears in the form of a circle about half an inch broad, which surrounds the mouth. This circle gives off a number of lines, giving the parts a puckered appearance. These lines project from the circumference all round to the borders of the lips. The epithelium is thickened; the scales are larger than in the other varieties. It is generally a very obstinate affection.

3. *Psoriasis præputialis* also occurs alone; it sometimes accompanies that of the scrotum, and is characterized by a thickening and corrugation of the skin, which is chapped, and often so much contracted as to produce phymosis. The slightest attempt to draw back the prepuce causes considerable pain, and frequently an oozing of blood from the parts. It is a tedious and painful affection.

4. *Psoriasis scrotalis*, and that of the pudendum in females, are of very rare occurrence, for which cases of chronic eczema have been often mistaken. However, psoriasis diffusa may sometimes appear on these parts, when the skin is dry, rough, thick, and furrowed, and the penis is sometimes surrounded with a scaly envelope. Syphilitic tubercles, developed in these regions, have often been mistaken for spots of psoriasis guttata.

5. *Psoriasis palmaria*, commonly called *grocers' and bakers' itch*, commences with slight inflammation, followed by the development of red, firm, hard spots in the palms of the hands, attended with pain and itching. It rarely appears on the soles of the

feet. Those raised spots are soon covered with a dry white scale, which is replaced as soon as it falls off, and according as the centre heals, the circumference increases, until the whole hand is affected. The centre is of a livid colour when denuded, the skin is thickened, furrowed, and chapped; the fingers, the palmar aspect of which is also affected, cannot be fully extended without exciting considerable pain. In females this affection is often complicated with psoriasis of the pudendum. It is difficult to be cured, and is very liable to return from handling sugar, and other dry pulverised substances.

6. *Psoriasis dorsalis* is sometimes confined exclusively to the dorsal aspect of the hands and fingers. The squamous patches are harder, drier, and larger than those of the foregoing, and there are deep and painful fissures in the neighbourhood of the articulations. This variety is also called grocers' or bakers' itch, and affects the same class of persons as psoriasis palmaria. Washerwomen are also very subject to it, evidently from the constant irritation produced by the soap. It is occasionally met with in the better classes of society.

7. *Psoriasis unguinum.* This variety was first described by Biett in his lectures; it frequently coexists with other forms of the disease, especially with psoriasis guttata. The disease affects the matrices of the nails, the secretion of which becomes altered, and the nails are misshapen, rough, uneven, and laminated. This complication is not peculiar to psoriasis; it frequently accompanies lichen, which when seated on the fingers, manifests itself by frequent eruptions, and penetrates to the roots of the nails.

Causes.—The causes of psoriasis are as obscure as those of lepra. It is sometimes hereditary, but never contagious; both sexes are liable to it, and adults more frequently than young persons. It occurs more frequently in spring and autumn than at any other period. It sometimes occurs in healthy persons who are both well fed and clothed. It often follows the abuse of spiced food, and of spirituous liquors, the use of sea-fish, violent mental emotions, and irritating local applications. It sometimes alternates with other diseases, and we have seen it succeed to articular rheumatism.

Diagnosis.—Psoriasis may always be distinguished from lepra by bearing in mind the following facts: in the latter the patches

are broad, round, depressed at the centre, and raised at the circumference. In psoriasis guttata, the variety most likely to be confounded with lepra, the patches are small, and their centre is raised. In psoriasis diffusa they are irregularly quadrangular, rough and uneven; and in psoriasis inveterata the patches are large and furrowed, and envelop the whole limb. It is unnecessary to make any remarks on the peculiar characteristics of psoriasis gyrata. The rounded patches of lichen circumscriptus may sometimes be mistaken for psoriasis; but it will be always easy to discover the central papulæ of lichen in or about the eruption. Biett did not coincide with Willan as to the conversion of lichen into psoriasis diffusa; he admits, however, that patches of lichen may be covered with scales; but adds that the papulæ are always to be distinguished with the slightest attention, and that the scales are only accidental.

One of the commonest forms of the *syphilitic* eruption may be confounded with psoriasis guttata—as for instance, when syphilis appears on the skin in the form of round, isolated, prominent patches; but in psoriasis they are covered with scales, and of a bright red colour, whilst in syphilis they are of a coppery colour. They are seldom covered with true scales, but in their stead with a sort of thin, slight crust. Biett has often pointed out in his lectures a peculiar and pathognomonic character—a small white border, analogous to that which succeeds a vesicle, surrounding the base of each elevation. Sometimes the débris of syphilitic squamous patches, and especially of syphilitic tubercles during the process of cure, have been mistaken for psoriasis gyrata. But here, as in the foregoing cases, the coppery tint and other concomitant symptoms, independently of the respective characters of each affection, will be sufficient to prevent this mistake from occurring.

The latter variety has also been confounded with certain forms of lepra, but the distinction is so evident, that we shall not dwell on it here. The thickness of the scales, and the presence of hard, firm, projecting spots, will prevent that form of psoriasis, which appears on the scalp from being confounded with *pityriasis*. It is sometimes more difficult to be distinguished from chronic *eczema*. However, in the latter affection, the scales are yellow, and the surface beneath humid; besides, there are always some elementary vesicles to be seen round the parts. Psoriasis of the lips still more

resembles eczema, as it presents the same kind of chaps or fissures; but the absence of vesicles, the large size and hardness of the scales, and the thickness of the epithelium, are diagnostic of the former. Several of the squamous diseases may exist simultaneously. This disease may also be accompanied by eruptions of a different order, as, for instance, porrigo favosa, but such complications are rare.

Prognosis.—Psoriasis is, generally speaking, a severe affection, especially on account of its rebellious nature and long duration. This prognosis will vary according to the age of the eruption and condition of the patient. For example, psoriasis guttata, although not a severe form of the disease, is nevertheless very obstinate: psoriasis diffusa still more so, especially when it attacks old people, or persons of a debilitated or broken-down constitution. Psoriasis inveterata, the severest form, sometimes resists every kind of treatment.

Termination.—Psoriasis may sometimes disappear without the aid of any treatment. The patches dwindle and fade, and the skin resumes its natural colour. In other cases, one variety passes into another; thus psoriasis guttata and diffusa are changed into the inveterate form. Sometimes it disappears on the accidental appearance of some other disease, as intermittent fever, erysipelas, measles. It rarely terminates fatally unless when it attacks persons far advanced in years. In the majority of cases, it may be cured by the application of appropriate measures. The patches gradually decline, the skin becomes more pliant, and by degrees resumes its natural colour and condition. In some severe cases, it resists every kind of treatment. The skin increases more and more in thickness, and its natural condition is altered; even the nails participate, as already mentioned, in the general tegumentary lesion. The disease may continue in this manner for years without exciting any dangerous complication; but the patient sometimes sinks under chronic inflammation of the mucous membrane of the stomach and bowels.

Treatment.—The treatment of psoriasis is essentially the same as that of lepra, and the curative indications of the latter disease are also applicable to psoriasis; but as psoriasis is often more rebellious than lepra, the remedial agents, especially the preparations of arsenic, should be pushed farther, and with more energy, than the

latter affection requires. Those who have had experience in the treatment of this disease know how little value is to be placed in the use of mere topical remedies and narcotic emollients. We do not hesitate to say, that a permanent cure, unattended by any dangerous results, may be obtained by the judicious administration of the arsenical preparations, which are indeed the only effectual remedies for psoriasis inveterata. We say this after long experience in the treatment of these diseases; and Biett entertained a similar opinion for the last twenty years of his life. We have published a case of psoriasis inveterata of fifteen years' standing, which was cured at the Hospital of St. Louis in twenty-six days with Fowler's solution, without occasioning the slightest accident. (Vide *Journal Hebdom.* vol. i. p. 259.) Another preparation of arsenic—the Asiatic pill—is also very serviceable in the severe forms of psoriasis.

℞ Arsenici protoxidi, gr. i.
Pip. Nig. gr. xij.
Pulv. Acac. gr. ij.
Aq. destill. q. s.
Divide in pil. xij. vel xvj.

Biett has obtained successful results from the arsenite of ammonia, administered in the same doses as Pearson's solution. The ointments of the proto-iodide and proto-nitrate of mercury are useful in stimulating the skin into more healthy action when the patches are obstinate. In adopting Ambrose Paré's plan of vesication, it will be necessary to apply the blisters eight or ten times successively to have any good effect.

The *local* varieties of psoriasis require other measures, independently of the general treatment, which consist principally in the administration of purgatives. In psoriasis ophthalmica, the application of three or four leeches behind each ear at the commencement of the treatment will often be attended with advantage; and, at a later period, frictions with an ointment of the proto-chloride of mercury over the seat of the eruption, as in psoriasis of the lips. Emollient local baths, and the use of the same ointment, are the most appropriate remedies for psoriasis præputialis. *Sulphur, and even cinnabar fumigations*, are attended with great success in psoriasis

of the scrotum. In psoriasis palmaria, after soothing the diseased parts with local baths of the decoction of bran, &c., the parts should be gently stimulated with the iodide of mercury ointment, which produces the happiest results. The arsenical preparations are often required in the treatment of this variety. It is in these local varieties that the iodide of sulphur is so beneficial. The pitch ointment is sometimes useful as an auxiliary in these cases. Both the general and local treatment should always be accompanied and assisted with the free use of baths. Baths, and even the vapour douche, are preferable to all other remedies for the local varieties, with the exception of psoriasis of the scrotum, which may be promptly cured by fumigation.

[Although M. Cazenave considers lepra and psoriasis to be perfectly distinct diseases, still he says that the treatment of psoriasis is essentially the same as that of lepra. If there is any distinction between them, it is, in my opinion, simply that psoriasis is a more inveterate form of lepra, and for that reason the arsenical preparations, and especially the iodides and Donovan's solution, will admit of being pushed farther than in lepra. For the local varieties, the sulphur and cinnabar fumigations recommended in the text will be found very efficacious. But the indications for the general treatment are so similar to those described in the preceding chapter on Lepra, it is sufficient to refer to that description for all that is necessary.—B.]

PITYRIASIS.

SYN.—*Dartre furfuracée volante; Porrigo Chloasma; Psoriasis; Lichen;* Dandriff.

Pityriasis is a superficial chronic inflammation of the skin, characterized by a copious furfuraceous cuticular desquamation, which is incessantly renewed. It may attack any part of the body, but its most frequent seats are the scalp, and the parts covered with hair. It is frequently attended with some change of colour in the skin, on which is founded the division of pityriasis into four varieties: *Pityriasis capitis; Pityriasis rubra; Pityriasis versicolor;* and *Pityriasis nigra.*

1. *Pityriasis capitis* appears frequently in new-born infants, in the form of a slight scurf, which soon becomes converted into a multitude of small imbricated scales; when these fall off, slight superficial red spots appear beneath. This variety is also met with in adults, and even in old people, when the cuticular desquamation is often very rebellious. In this case it does not present a continuous layer, as in children, but a constant desquamation, which is often very obstinate in its resistance to remedies. It is difficult to describe this disease in the order of its development, as its existence is only known by the presence of minute scales. It is accompanied by no other symptom than a slight itching; the patient scratches himself, and produces a copious exfoliation of the cuticle. The small scales are almost immediately replaced, and when they fall off, the surface beneath does not look inflamed; on the contrary, if a small scale is raised with the nail, which can easily be done, the surface from which it was detached has an indolent appearance. On rubbing this spot, another thin lamella, analogous to the first, may be raised; and several may be removed in this manner without arriving at the inflamed surface. A multitude of extremely thin, white, and dry lamellæ, generally adherent at one extremity and free at the other, are visible on the skin. Sometimes they resemble a peculiar envelope, which appears furrowed, and divided into innumerable minute and extremely thin lamellæ. The slightest movement produces an abundant furfuraceous desquamation. This exfoliation seems composed of small portions of cuticle, like molecules of meal, especially on the chin, and on passing the hand over it, falls off freely, and is instantly reproduced. The scales are sometimes larger on the scalp, where they resemble a split pea or lentil, but more flattened.

Causes.—The causes of pityriasis are not easily ascertained. Its development is often accompanied by an inactive condition of the bulbs of the hair. It appears in the infant, in whom the hair has not yet grown, and in old people, when it has fallen off. It is often produced on the chin by the irritation of the razor. The irritation produced by constant combing with a fine-tooth comb also excites the disease. Pityriasis versicolor is caused by the growth of a vegetable parasite.

Diagnosis.—The large size and prominence of the patches of

psoriasis, the peculiar shape of those of lepra, and the characteristic *farinaceous* desquamation of pityriasis, will prevent these diseases being confounded together. The cuticular desquamation which takes place in the exanthematous affections is very different from that of pityriasis, and when it occurs in chronic eczema, there are always some elementary vesicles to be seen in the vicinity of the diseased parts; besides, the small scales are not incessantly renewed, as in the former affection. The presence of papulæ, and the thickening of the skin in lichen, as well as the difference in the kind of exfoliation, will distinguish the disease. The peculiar colour of the ephelides will distinguish them at once from pityriasis; and a variety of ichthyosis, which is sometimes mistaken for the latter disease, may be distinguished by the profound alteration of the skin, its rough, thickened appearance, and the dirty grey colour of the scales; while in pityriasis the skin is rather softened than thickened, and the scales are white. Besides, one is almost always congenital, while the other is always accidental. Pityriasis capitis can hardly be confounded with porrigo. The yellow or favous pustules, so characteristic of the latter affection, are sufficient to distinguish it at a glance.

Prognosis.—Pityriasis capitis is in general a slight affection. It may co-exist occasionally with other chronic inflammations. Its duration is often very protracted.

Treatment.—The only treatment required is some bitter infusions, to which may be added one or two drachms of the sulphate of soda, or subcarbonate of potass, to the pint, and alkaline lotions to the parts affected; sometimes alkaline baths, or the vapour douche. In infants and children, brushing the head with a soft brush, and cleanliness, are the only measures required. The irritation of the brush excites new action in the parts, and the exfoliation soon ceases: a fine-tooth comb should not be used. When the disease is seated on the chin in adults, the beard ought to be cut with a pair of scissors instead of a razor.

2. *Pityriasis rubra* is characterized by the appearance of slight red patches or spots, the size of a split pea, which soon coalesce, and extend gradually, so as to form large, continuous, red surfaces, covered with a multitude of minute scales, which fall off and are reproduced continually. The surface is generally hard, but is some-

times soft to the touch, which depends on a kind of oily exudation which it gives out. It appears to occur frequently from the action of heat, the rays of the sun, and especially from acute moral affections. Its red or rosy hue distinguishes it from the pale yellow colour of psoriasis versicolor. If the patient is young and vigorous, venesection may be employed; but if old and feeble, mild tonics should be administered; and alkaline lotions, together with simple vapour, or sulphureous baths, are the external agents from which most benefit will be derived.

3. *Pityriasis versicolor* manifests itself in the form of continuous patches, of various size, covered with a continual furfuraceous desquamation. It is distinguished by the variegated yellow discoloration of the cuticle, which continues for a considerable period after the cure of the disease. It appears chiefly on the neck, abdomen, chest, and sometimes on the face. It often arises from exposure to the sun in warm climates, from the ingestion of acrid food, spices, &c. It is distinguished from the ephelides by the furfuraceous desquamation, and from all other affections of the skin, by the peculiar pale yellow discoloration of the cuticle. It is a slight, but usually a very obstinate eruption, and requires the same remedial measures as the foregoing variety, especially sulphur baths and lotions.

[A variety of the vegetable parasite described in the chapters on Ringworm and Favus is a constant attendant on Pityriasis versicolor, and spreads between the epithelium scales to which it is attached. The sulphurous acid in solution, as recommended by Dr. Jenner, is the best agent to kill the vegetable, in which consists the cure.—B.]

4. *Pityriasis nigra.*—Numerous examples of this variety were observed in Paris in 1828-9. The furfuraceous desquamation occurred on an intense black surface. The disease appeared in two distinct forms. In the one the epidermis was the seat of the coloration; and if detached, a red surface appeared beneath. In the other, the epidermis was transparent, and the cutis vera was the part discoloured. The treatment of the other varieties will also answer in this form of the disease.

[The treatment of pityriasis capitis, when it occurs in young children, consists chiefly in washing the scalp frequently with soap

and water, brushing it afterwards with a soft brush; the warm bath, and a milk diet. This affection often attacks young girls of fair and delicate skin, of a chlorotic appearance. In such cases I have found the mineral acids, and mild preparations of iron internally, and a wash or lotion of liquor potassæ and rose water, or of the borate of soda externally, together with unstimulating, nutritious diet, and the frequent use of the warm bath, the most useful plan of treatment. When the disease occurs in old persons, the prussic acid lotion (see formulary) will be found beneficial in allaying the troublesome itching with which it is accompanied. In these cases a variety of stimulating and astringent ointments have been recommended, as the creasote, sulphur, and tannin ointments; and, in obstinate cases, of long standing, the preparations of arsenic, iodine, and mercury. The hair should, if possible, be cut close in all cases, and the scalp cleansed before applying the wash.—B.]

ICHTHYOSIS.*

SYN.—Fish-skin disease.

Ichthyosis differs in many points from the rest of the squamous diseases. It is not merely the result of an accidental alteration and thickening of the epidermic lamellæ. It is evidently a profound and special organic lesion of the whole cutaneous tissue; but as it would be difficult, in the present state of science, to indicate precisely the class of cutaneous eruptions to which it really belongs, we shall be content for the present to describe it, as Willan and Bateman have done, amongst the scaly diseases.

Ichthyosis is characterized by the development upon one or more parts of the tegumentary envelope, most frequently over the whole body, of thick, hard, dry, imbricated scales, of a dirty grey colour,

[* Surely this diseases is misnamed as well as misplaced. There is nothing *scaly* about it. The name, *warty* disease, would be much more appropriate than that of fish-skin. It is true the cuticular appendages are not organized, like true warts, and do not bleed on being removed; but otherwise their physical characters have a much greater affinity to those of warts than to the scales of a fish.—B.]

resting upon a perfectly uninflamed surface, and never accompanied by pain, heat, or itching. Although this disease may appear on every part of the body, it is met with less frequently on the palms of the hands, soles of the feet, internal aspect of the limbs, groins, armpits, face, and particularly the eyelids, than on the other regions; even when the disease is almost general, these parts remain intact, or else become very slowly, and at intervals, affected.

A case of this kind was under our care at the Hospital of St. Louis for some time: a boy, twelve years of age, was suffering from ichthyosis, which had spread over every part of the body except the face; but, singular to relate, whenever the slightest irritation of the gastro-intestinal mucous membrane occurred, the patient's face assumed first a dirty colour, it then became covered with small, dry, greyish scales, with a slight thickening of the skin. These scales were much thinner than those of the rest of the body, which, on the other hand, were broad, hard, and blackish, imparting to the face a peculiar aspect, like that of an old man. According as the internal irritation subsided, the scales fell off. The face gradually resumed its natural appearance, and nothing remained after the disappearance of the eruption but a slight thickening of the skin. The scales on the other parts of the body did not present anything peculiar. The boy's health was very good, but the mucous membranes were extremely susceptible of the slightest excitation.

Ichthyosis appears principally on the external aspects of the limbs, round the joints, on the knee and elbow, on the upper part of the back, and on those regions where the skin is naturally thick and coarse. It is generally a congenital disease, and lasts during life. Even when it is developed accidentally, it may be prolonged for an indefinite period. In some instances, however, it may disappear, but its duration is always long, and varies from several months to as many years. Congenital ichthyosis is never strongly marked at the period of birth; but the skin, instead of presenting that smooth and delicate appearance common to new-born infants, is dull, thick, and fretted. The disease is more apparent as the infant grows older, and may appear under different forms. Sometimes the skin, although altered and slightly thickened, remains soft; it becomes covered with small, greyish, slightly resistant epidermic lamellæ,

accompanied with a continual furfuraceous exfoliation. According to some writers, this variety chiefly attacks old people, but it appears to us that they have mistaken some other affection, having some analogy with it, for ichthyosis.

It often appears, however, in a much more severe form than the foregoing, and becomes much more distinct according as the patient grows older. The skin is thick, furrowed, and covered with genuine scales, which are dry, hard, resistant, greyish, and sometimes pearly-coloured, often very glossy, and surrounded several times with a kind of blackish circle. These scales are formed by slightly thickened cuticle, furrowed all over, divided into small irregular-shaped portions of different sizes, which are free at one extremity, and imbricated at the point of attachment to the skin. Some of them are small, and surrounded with a multitude of minute farinaceous points, which correspond to the furrows of the epidermis. Others are larger, and are much diffused over the wrinkled surface. These scales may be removed with impunity, and without occasioning the slightest pain, with the exception of the larger ones, which are more deeply and firmly attached to the skin. None of these scales leave the slightest redness after them when they disappear. But the skin is so rough, that on passing the hand over it, it conveys the sensation of the surface of a file, or even of the backs of certain fishes. The scales are thicker and more apparent on the limbs, the front of the patella, the elbow, the external surfaces of the arms and legs, than elsewhere.

However so much extended this scaly eruption may be, and whatever alteration it may produce in the tegumentary envelope, it never occasions any serious derangement of the functions of organic life. There is no pain or itching; the skin, however, is no longer able to perform its transpiratory functions, unless at certain points, as for example, by the soles of the feet, which are generally free from scales even when the disease is diffused over the whole body, and are always moistened with copious perspiration. Congenital ichthyosis seldom undergoes any modification. However, in some rare instances, and at certain periods, it subsides for a time, under the influence of internal organic inflammation, but it reappears at the following season with all its former characters and symptoms.

We have seen a case of this disease complicated with a papular eruption in a young child, neither of which seemed to interfere with the other.

Autopsy.—Post-mortem examinations of persons who have died with ichthyosis have not revealed any pathological condition evidently depending on that disease. The skin, however, appears to be deeply altered in structure, and its whole thickness is involved in the morbid thickening and formation of the scales.

[Recent observations, and especially those of Gustav Simon, go to prove that the horny scales which characterize this disease, are composed of cells entirely similar to those of epidermis, and that, in fact, ichthyosis is an hypertrophy or increased development of the cuticle, in which the cutis is partially involved; but the cause of this hypertrophy of the cuticle is altogether unknown. Gluge also ascertained, upon microscopical examination, that the scales were formed by epidermic cells. Mr. Wilson, on the contrary, says, that the scales are not epidermis, but merely hardened sebaceous matter—an opinion in which I do not coincide.—B.]

Causes.—Ichthyosis may be congenital or accidental. When congenital, it is generally hereditary. In other instances it seems to be the result of fright, or some other acute moral affection on the part of the mother. When it is accidental, and especially when it is partial, it depends on external causes. It is endemic in some climates, and frequently appears in towns along the sea-coast, evidently caused by the ingestion of putrid fish, stagnant water, and by the constant dampness and moisture of these districts. However, it has been known to occur under circumstances directly opposed to these, and even from intense grief, fear, or rage. The fundamental causes of this affection are, however, still involved in much obscurity. It may appear in either sex, but in men much more commonly than in women, in the proportion of nineteen out of twenty, according to Biett's experience.

Diagnosis.—When this disease is well marked, it cannot be mistaken for any other cutaneous affection, but when it is partial and superficial, and the scales are thin and small, the cuticular exfoliation which supervenes resembles the desquamation which

succeeds eczema and lichen; but the origin of the disease, the absence of vesicles and papulæ, and the peculiar character of its own eruption, will at once distinguish it from these affections.

Prognosis.—Congenital ichthyosis is an incurable disease. The prognosis is not, however, very unfavourable, as the patient continues to enjoy pretty good health, and no internal disease ever supervenes as a consequence of ichthyosis. The accidental form is ever rebellious, and may continue during life.

Treatment.—It is evident from the history and causation of this disease, that the only remedial measures that are at all likely to give relief, are palliatives and external applications; mucilaginous lotions and vapour baths, for example, seem to have the effect of modifying the roughness, and otherwise altering the condition of the skin. Willan has recommended the internal use of pitch, as having the effect of restoring the skin to its natural pliancy. We have not found this remedy at all so efficacious in this affection at the Hospital of St. Louis. The only remedies of the slightest use are those above mentioned, and blisters, which, in some rare instances, have cured this affection when it was partial.

It is unnecessary, in a manual of this kind, to enter into an account of the different varieties of ichthyosis which are merely interesting and curious deviations from the common form of that disease, the history of which would be attended with no practical utility.

[A case of congenital ichthyosis was exhibited at the different Medical Societies of London. The patient, Thomas Jones, appeared to be otherwise a healthy boy, of a fair complexion. He was a native of Wales, eleven years of age, and the youngest but one of a family of ten children. None of the rest of the family were affected with the disease, and the mother attributed the cause in this instance to a severe fright which she received during the last months of pregnancy. The disease was extensively diffused over the skin. It was more strongly marked on the lower extremities than on any other part, and the morbid product was in some places nearly half an inch in length. The skin on the palms of the hands, on the face, the neck, the upper regions of the chest and back, was perfectly free, and remarkably fair and healthy-

looking. Although the soles of the feet were, at that time, free from the disease, the dark discoloration of the skin of these parts indicated the previous existence of the morbid appendages. The disease first made its appearance about five or six weeks after birth; it proceeded slowly and gradually, until at length it became diffused over the body. It never interfered with the boy's general health; which has been always excellent. The eruption, if I may so call it, is shed at intervals of variable extent, and soon grows again. The scaly appendages fall freely during the night, from the heat of the bed and the friction of the body against the bed-clothes, and the disease may be seen in various stages on different parts of the skin. The cuticular appendages are perfectly unorganized; they emit a disagreeable smell, similar to that of mice, and when ignited give out a strong odour of burning feathers or horn. Cows are occasionally affected with a disease somewhat similar to ichthyosis. No kind of treatment succeeds permanently. The scaly envelope may be removed by sulphur and alkaline baths, but the disease is sure to return. Arsenic fails signally in the treatment of this affection. The iodides of mercury are the only internal remedies that I have found of any use.—B.]

TUBERCULA.

Tubercular Eruptions.

The diseases which have been classed under this order, are characterised by small, primary, circumscribed, solid tumours of various sizes, formed in the substance of the skin, and very different from those cuticular indurations which succeed some of the pustular diseases. These small tumours constitute a peculiar elementary lesion, to which the name of *tubercle* has been applied by dermatologists, and they generally terminate in suppuration or in ulceration of a rebellious character. The essentially tubercular diseases but seldom occur in European countries; indeed, they appear to be peculiar to the tropics.

We propose to describe in this order, only three of the numerous diseases arranged by Willan and Bateman amongst the tubercula—these are *Elephantiasis Græcorum*, *Frambœsia*, and *Molluscum*—as we consider that several of the affections mentioned by those writers belong, properly speaking, to the province of the surgeon, and the others have been more appropriately arranged and treated of elsewhere.

Tubercular diseases are essentially chronic in their nature; they are slowly and gradually developed, and continue for months and even for years.

Symptoms.—The tubercles are red in *frambœsia;* they are reddish, sometimes the colour of the surrounding skin, in *molluscum;* and of a dark livid colour in *elephantiasis.* Their size is very variable; in some cases they are not larger than a pea, in others they are as large as an egg. They are generally distinct and isolated; sometimes, however, they are set close together, and collected in groups, as for example, in frambœsia. These diseases

are rarely accompanied by general febrile symptoms, with the exception of elephantiasis, which is frequently complicated with chronic inflammation of the mucous membranes of the stomach and bowels. The eruption is commonly confined within a limited compass. It is, however, sometimes general. It may remain stationary for a certain period, or terminate by resolution, or else the tubercles may suppurate at their summits, when they become covered with scabs of variable thickness. After a time these scabs are detached, and expose unhealthy looking sores. In other instances, they are merely slight excoriations, whence oozes a kind of serous exudation, which terminates in dry, thin, and very adherent incrustations.

Causes.—The causes of the tubercular diseases are involved in obscurity. They are of exceedingly rare occurrence in these countries, but are common enough in the tropics. Frambœsia and one of the varieties of molluscum are contagious.

Diagnosis.—The tubercular eruptions are characterised by symptoms and appearances so peculiar, that they are not only easily distinguished from all other cutaneous diseases, but one of them can never be mistaken for another of the same order. The small, solid, circumscribed and enduring tumours above-mentioned are peculiar to this class of diseases. There is, it is true, a variety of syphilis characterised by the presence of tubercles; nevertheless, there are striking differences between these affections—in the form and colour of the eruption, the progress of the tubercles, and the character of the symptoms.

Prognosis.—The tubercula are in general severe diseases, principally owing to their long duration and rebellious nature. Elephantiasis Græcorum is in particular a formidable affection. It soon exerts its destructive influence upon the system, and is generally complicated with diseases as rebellious as itself. It resists every method of treatment, and speedily terminates in death.

Treatment.—As these diseases rarely occur in Europe, and as they have been but little investigated in the countries to which they are peculiar, we cannot be expected to know much respecting their treatment. The rebellious character of Elephantiasis Græcorum, which is better understood than any of the other eruptions of this order, depends, perhaps, in a great measure on the fact

that the physician rarely sees the disease until it is already far advanced.*

ELEPHANTIASIS GRÆCORUM.

SYN.—*Tsaraäth of the Jews; Lepra Arabum; Elephantia; Lepra Hebræorum; Lepra tuberculosa; Leontiasis; Satyriasis; Elephantiasis tuberculata* and *anaisthetos; Lepra Elephantiasis; Morphea*, of Brazil; *Baras*, of Arabia; *Radesyge*, of Norway; *Ma-fung* of the Chinese.

Elephantiasis Græcorum, or tsaraäth of the Jews,—one of the most terrible diseases that has afflicted humanity in ancient or modern times, but happily a stranger to this climate,—is most frequently characterized by the appearance of patches of a purplish or fawn colour, with lesion and very often loss of sensibility, which spots are succeeded by elevated tumours, irregular both in shape and size, of a fawn or purplish colour, soft and smooth to the touch, and which may at a later period become the seat of unhealthy ulceration. Such ulcerations may also exist at the same time with the tubercles, in the same patient, or may occur alone, without having been preceded by tubercles.

The Greeks gave it also the name of *leontiasis*, on account of the hideous deformity produced by it, when its large irregularly shaped tubercles covered the nose, lips, and forehead, and, together with the yellowish colour and oily aspect of the patient, gave the face the appearance of that of a lion.

As tubercles are not always found in this disease, and as the word *tubercle* is used to describe a special pathological product, we propose to designate Elephantiasis Graecorum by the word *tsaraath*, making two species, *tsaraath phymatodes* and *tsaraath aphymatodes*, according as it is tubercular or not tubercular (φῦμα, tubercle; *a* privative); these species to be subdivided into *anæsthetic* and *hyperæsthetic*, according as there is increase or loss of sensibility, the last state being the rule, and the first the exception.

[* A new remedy for elephantiasis, called *assacou*, the name of a tree, (hura Brasiliensis,) indigenous to the Brazils, was sent to France in 1848. It is given in the form of extract of the bark, and also in infusion and in baths.—B.]

We shall describe the disease from the details furnished by Drs. Robinson and Winterbottom respecting it in Africa, by Larry as it occurred in Egypt, by Ainslie in Hindostan, by Adams at the Island of Madeira, by Dr. Fabre in Brazil, Dr. Skene in New Brunswick, and Dr. Danielssen in Norway, comparing their observations with what we have ourselves seen.

Causes.—The effect of climate on the development of tsaraäth, or Elephantiasis Græcorum, is most marked. It is not met with at the present time in temperate regions, but there is a disposition to it as you approach the equator on the one hand, and the poles on the other. It is found on the coast of Norway from 60° to 70° of latitude. It does not exist in Europe between the 40° and 55° of North latitude; but this is not true with regard to Asia and America. It is said to have been of very frequent occurrence in France, England, Ireland, Italy, and Germany during the middle ages, and to have been carried to those countries from the East by means of the crusades. But, doubtless, many other diseases of an entirely different nature were confounded together during that period.

All ages and both sexes are liable to it; but it appears to attack males in a larger proportion than females, to appear more frequently before puberty, and to affect more especially those of the bilious temperament. It has been seen in the new-born infant, but rarely, if ever, commences after the age of forty years. Elephantiasis Græcorum is admitted by all to be hereditary, but it often passes over one generation, and appears in young children. Its contagion is not admitted at the present day. The opinion that it has any connexion with syphilis has been for a long time abandoned. Insufficient nourishment, the use of indigestible food, the prolonged and exclusive use of salted food, and of smoked and dried fish, have great influence in developing it in the countries where it prevails. The use of pork is also said to have a similar effect upon the strangers and upon natives. To the above causes may be added, neglect of cleanliness, residences in low and damp places, the neighbourhood of marshes, exposure to weather, great fatigue, venereal excesses, and abuse of alcoholic liquors.

Invasion.—Elephantiasis Græcorum sometimes shows itself without any particular alteration in the health, and without any immediately appreciable cause; but, in other cases, its appearance is

preceded by general symptoms, more or less marked, as languor, remarkable depression of spirits, and a decided febrile state. Occasionally, its development is preceded by deterioration of the general health for several years. The *tubercular* form of the disease commences with the appearance of spots, which are usually of a fawn, but at other times of a purplish or dark red colour. Sometimes tubercles of these different colours appear at the same time on the same person. The face, fore-arms, and the external aspect of the legs, are most frequently the seat of the first appearance of these spots. In some cases the spots, and afterwards the tubercles, are confined to particular parts, as the nose and the ears, when they are accompanied by a peculiar swelling of the cellular tissue. The disease comes on so insidiously at times, and in the midst of such apparent health, that the spots would cause no anxiety, if it were not for the insensibility of the skin at these points. This insensibility is not constant; but there may be such an increase of the sensibility, not only of the spots themselves and of the tubercles, but of other parts, and especially of the hands and feet, that the touch will cause a sensation like that produced when the elbow is struck, or by a smart electric shock.

Usually there are other symptoms indicating serious lesion of the spinal nerves, such as general prostration, debility, muscular cramps in different parts of the body, and diminution, rarely increase, of the venereal appetite. The skin becomes dry, while the sebaceous secretion seems to be increased, and an oily matter is spread on the surface, which is most apparent on the face. All these symptoms increase with the increase of the disease, the tendency of which is to extend itself and attack other parts. The spots may remain stationary for a variable time, from a few weeks to a year or more.

Progress.—Usually the number of the spots gradually increases; they increase in size and in elevation, and, soon losing their smooth and even surfaces, become rough and uneven. When seated on the face, a swelling of the cellular tissue of the nose, forehead, eyes, chin, cheeks, and especially the ears, accompanies the development of the tubercles on these parts, giving rise to fawn-coloured or livid tumours, soft to the touch, which produce great deformity, and may reach a large size. When these tubercles are seated only on

the lower limbs, they frequently occupy the lower part of the thigh, or the parts about the external malleolus, in which latter case there is frequently œdematous swelling. These tumours sometimes become confluent, form larger groups, and at other times they remain isolated. Their size varies from that of a small pea to that of a hen's egg. They can be raised and taken, as it were, between the fingers, and may be bent or cut off even with the skin without causing the least pain.

When the face is attacked, the mucous membranes of the nose, mouth, pharynx, and eyes, rarely remain a long time unaffected. The voice begins to be hoarse, the respiration becomes more frequent and more laboured, at the same time that the colour of the tubercles becomes more livid, and the smell of the breath peculiarly offensive. The eye is attacked, and vision destroyed, the hair falls from every part of the body, the testicles become atrophied, and the nails white and brittle. When the patient has reached this stage, the deformity is great, and the unfortunate sufferer an object of disgust, which is still more increased by the excessive fœtor of the breath, and of the discharge from the nostrils.

The second period, or the tubercular, which succeeds the spots, may continue months, and even years, with ulceration or suppuration of the tumours. Death may even take place before ulceration occurs. Those which ulcerate are gradually covered by a blackish scab, leaving, when it falls off, fungous and ill-conditioned ulcers, which are bathed by a fœtid sanious pus, the concretion of which forms still thicker scabs at the same time that the ulceration goes on increasing in depth, and denudes the muscles after destroying the skin. When resolution of the tubercles takes place, a depression follows, and their former seat is marked by a change in the colour of the skin. The ulcerations usually destroy the subjacent tissues, thus mutilating the nose, and destroying the septum and palatine arch. On the extremities, the ulcers extend in depth, and may cause death by becoming gangrenous, and the patient may thus witness the slow destruction of his limbs, and sometimes one finger after another is gradually removed. The general symptoms are those principally of lesions of motion, and derangement of the digestive functions; there is sometimes alternately constipation and diarrhœa, and often a

voracious appetite. The circulation is slow, and is sometimes hardly felt at the extremities.*

Tsaraäth aphymatodes, or the *non-tubercular* form of Elephantiasis Græcorum, is characterized by the appearance of spots, also livid or fawn colour, but which, instead of being succeeded by hard, elevated tumours, become covered with bullæ or vesicles, and sometimes with pustules; and, in some cases, there is atrophy of the dermis, and ulceration destroying in depth. The bullæ are sometimes isolated and at other times grouped, and vary in size. They open after a certain time, and are succeeded by ulceration. They appear first, according to Dr. Fabre, principally on the hands, arms, feet, and legs, and afterwards on the back towards the shoulders, and on the thighs about the trochanters. The pustules are also followed by ulceration of the parts, and, when on the extremities, almost always destroy the phalanges.

This variety may co-exist with the tubercular form, or may be developed alone. The insensibility of the skin is most frequently preceded by a remarkable state of hyperæsthesia; and, according to Dr. Danielssen, this increase of sensibility often precedes the eruption on the hands and feet, and may continue for years; but it gradually diminishes, and anæsthesia soon commences, at the same time that all secretion ceases on these points. The skin in these places undergoes a kind of atrophy; it becomes pale, dry, and hard like parchment, and loses all its elasticity. The want of sensibility gradually extends over the rest of the surface. The mucous membrane of the nasal fossæ afterwards becomes affected, and the septum is destroyed by ulceration. Necrosis attacks the phalangal bones gradually in succession, and after several weeks or months of suppuration one or more of them is thrown off, and the ulcer heals with shortening of the finger. All the toes and fingers may thus be destroyed alternately and gradually, and the extremities slowly removed. The non-tubercular variety of Elephantiasis Græcorum is much more rare than the tubercular variety, even in those countries where it most prevails. According to Dr. Fabre, their relative frequency is in the proportion of one to twenty.

[* In the latter stages of the disease the urine is highly albuminous, and nearly devoid of urea, and the nails and hair become bent, distorted, thickened, and thrown off.—B.]

Death in the non-tubercular variety is sometime sowing to a cutaneous complication, but more frequently to internal lesions, either abdominal, thoracic, or, what is more rare, cerebral. Colliquative diarrhœa, and discharges of blood in consequence of intestinal ulceration, are the most frequent causes of the fatal termination in the abdominal affections, and tubercular phthisis and chronic forms of inflammation of the lungs in the thoracic cases. Death is sometimes hastened by obstructions of the glottis and larynx, causing suffocation. Among the cerebral lesions, apoplexy is not rare, but those forms of mental derangement are not met with in this disease which occur so frequently in pellagra.

Complications.—The tubercular form of Elephantiasis Græcorum may be accompanied or complicated by Elephantiasis Arabum. It may also be complicated by tubercles in the lungs, or in the mesentery, and may appear as a sequel of other affections. *Duration.*—The duration of both forms of the disease is usually from seven to fifteen years, but it may last thirty or forty years. It may sometimes disappear spontaneously, or by the effect of remedies; but almost always re-appears, and in a more grave form.

Post-mortem appearances.—These are various, and depend on the duration and intensity of the disease. The integuments, as we have already mentioned, are studded with tubercles of various sizes; some appear to occupy the tissue of the true skin; others seem to be the effect of repeated attacks of inflammation in the laminated tissue underneath the dermis, producing whitish firm indurations. The skin which covers them is commonly thin and shrivelled. The skin of a patient whose case is detailed by M. Fabre was macerated for several days, and presented, first, a thickened state of the epidermis; second, beneath this a very vascular layer, similar to erectile tissue; third, another layer of hard, thick, and dark tissue, with several cavities, containing pale yellow or white masses, and, below all, thickened adipose tissue.

The mucous membrane is mostly of a bronze colour; sometimes there is a diminution of the colour; the tubercles are effaced, and there is no hypertrophy remaining. The lips and the conjunctivæ are more or less tumefied and changed in colour; the mucous membrane of the tongue is often thick and fissured; the lining membrane of the palate, in most of the cases examined by Biett, contained

agglomerated tubercles in a state of ulceration, and extending to the uvula. In several cases, where the voice was greatly changed, the mucous lining of the larynx contained tubercles. In a patient from Guadaloupe, Biett found the arytenoid cartilages carious, and nearly all destroyed. The gastro-intestinal mucous membrane is generally softened; in the stomach it is often thinned; in the small intestines thickened. In the majority of cases, death is occasioned by ulceration of the ileum, colon, or ileo-cœcal valve; the ulcers either occupy the glands of Peyer, or are the results of the tubercles. In many subjects the lungs are more or less diseased. Scrofulous tubercles, either softened or in a state of crudity, have been noticed by Biett in a patient from Guyana, and in another who had made several voyages to the East Indies. He regards this lesion, however, as accidental; we have never seen it ourselves.

Baron Larrey has seen scrofulous tubercles in the mesentery and disease of the liver. We have seen the inner membrane of the cavæ and pulmonary veins and aorta of a brown colour, the blood being fluid, oily, and of a dark red hue. The bones are occasionally spongy, softened, and deprived of marrow. In conclusion, we should remark, that the pathology of this disease has been chiefly investigated by European practitioners, particularly Schilling, Valentin, Raymond, and Biett. It were desirable that further researches were made by practitioners in hot climates, where the disease chiefly prevails.

Dr. Fabre, who studied this disease in Brazil, was struck with—1. The remarkable diminution of size of the brain and spinal marrow, which presented a kind of atrophy, without any appreciable alteration of structure. 2. The quantity of serum effused into the ventricles and the vertebral canal. 3. The constant presence of a very great number of the small glandular bodies, called *glands of Pacchioni*. 4. The occasional existence, on the surface of one of the hemispheres, of circumscribed suppuration of the membranes of the brain adherent to it, from which was discharged a colourless plastic pus.

[*Pathology*.—The same slow, gradual, and uninterrupted process of exudation of a fibrinous or albuminous material from a diseased blood seems to occur in both varieties of elephantiasis. But, as Dr. Parkes observes, the causes which in one case localize this dis-

position in the skin, in the mucous membranes, and, at a later period, in the serous membranes, and which in the other case throw in the exudation upon the posterior portions of the membranous sheath of the cord, from the pressure of which proceed the remarkable nervous symptoms, are of course unknown. Still that the process is the same in both varieties appears from their power of conversion into each other. The exudation which is pouring out into the skin, may be directed to the spinal cord, but still it appears to be the same exudation, and is produced by the same abnormal condition of the blood. But what it is which produces this change in the blood, what singular alteration in nutrition can thus affect in this slow way the albuminous principles of the vital fluid, it is at present impossible to say.—B.]

Diagnosis.—The loss of sensibility in the majority of cases, and the opposite state of its abnormal increase in the exceptional ones, will always distinguish the spots of tsaraäth from those of erythema and of ephelis. Much obscurity has arisen from the manner in which writers have confounded different diseases under the same name; still Elephantiasis Græcorum (*tubercular lepra*) cannot be mistaken for *lepra*, properly so called, (*lepra vulgaris*), which has been described in the chapter devoted to scaly diseases; although bearing the same name, their respective characters are too well marked to leave any doubt. The *Arabian elephantiasis* is a disease altogether *sui generis*. Instead of tubercles, or ill-looking tumours, separated by deep folds, and developed in the dermoid or subcutaneous cellular tissue, we have an uniform tumefaction of some portion of the body, especially of the legs. The disease, in fact, is not seated, at least in the commencement, in the integuments. Elephantiasis Græcorum has been confounded with *syphilis;* and, by some authors, said to be a modified form of this latter complaint. An attentive consideration of a single case is sufficient to prove the difference between the two diseases. Besides, the tubercles of syphilis are hard, small, and copper-coloured; while those of elephantiasis are large, soft, distinct tumours. In *syphilitic ulcers* the edges are hard and clean, the bottom of the sore greyish, deep, and surrounded by indurated cellular tissue, the form of the ulcer is circular; while the ulcers produced by elephantiasis are superficial, smooth, and rest on a soft, fungous tumour. Finally, we cannot

confound *syphilitic spots* with those of elephantiasis; the former have a peculiar colour, being always indistinct, and never red, or accompanied by the puffy appearances seen in elephantiasis. The sensibility of the skin is not altered.

Prognosis.—Elephantiasis of the Greeks is a dangerous disease, and almost always an incurable one. The patients generally die, worn out by their sufferings and by slow fever, or the mucous membrane of the viscera becomes involved, and they are cut off by chronic gastro-enteritis. But the disease sometimes terminates more favourably; the indolent tubercles are attacked by inflammation, they gradually diminish, and finally disappear. In other cases they ulcerate; the ulcers are covered with dark adherent scabs. The latter fall off, and the skin underneath is cicatrized. Unfortunately, such cases are rare; they seldom occur except in young healthy persons, attacked for the first time, and not long exposed to the influence of the exciting causes of the disease.

Treatment.—The various remedies employed in the treatment of this disease are generally unavailing; first, because the patients have been long subject to the disease, and have tried almost every remedy before they came to Europe; and secondly, because in its advanced stage, Elephantiasis Græcorum is frequently accompanied by an irritation of the mucous membrane of the intestinal canal which prevents the use of energetic and otherwise efficacious remedies. If encountered at its commencement, the disease should be treated with energy and vigour. In addition to general remedies, means should be used to produce a strong impression on the affected parts. After the example of Larrey, the actual cautery might be fearlessly employed. We ourselves even saw admirable results by means of cauterization, applied by Biett to a case in which the tubercles were confined to the face, and were arrested in their progress by it.

If this is not resorted to, topical means must be used for the purpose of increasing the vitality of the parts. Blisters may be applied on the affected parts, and frequently renewed: a plan, by means of which we have seen Biett restore the sensibility to parts when it had been lost. Dry frictions, or frictions with stimulating liniments, may be used for the same purpose with advantage; also irritating vapour baths, and vapour douches, which last may be

directed upon the seat of the disease for fifteen or twenty minutes, the patient being directed to knead the tubercles constantly at the same time. Frictions with ointment containing iodide of potassium may also be used.

Preparations of arsenic are among the most useful internal remedies, and are the more likely to be of service as the disease is the more recent. Pearson's solution and the Asiatic pills have seemed to us to answer better than Fowler's solution.

Cinchona appeared to be very useful in a case treated in London by Dr. Bishop, who employed stimulating frictions at the same time. Mercurial preparations have always proved useless, and sometimes have caused inconvenience, at the Hospital of St. Louis. Sometimes constant irritation of some portion of the mucous membranes renders the use of any remedies impracticable. In such cases soothing and mucilaginous drinks, low diet, warm baths, and especially opiates, are very beneficial. Sulphur baths, and particularly vapour baths, constitute indispensable auxiliaries to every kind of treatment. The regimen should always be supporting and nourishing. [A new remedy for Elephantiasis, called *assacou*, the name of a tree which grows in the Brazils, has been lately imported into France. It is given in the forms of infusion and of extract of the bark.]

It is absolutely necessary that the patient should leave the country where he contracted the disease as long as the least chance of cure remains.

FRAMBŒSIA.

SYN.—*Pian; Yaws; Mycosis* of Alibert.

The American disease, called *pian* or *epian*, seems to be identical with that denominated *yaws* in Guinea. They have been described by Bateman under the name of frambœsia, derived from the peculiar appearance which the disease generally assumes. It is very rare in Europe, but is indigenous in Africa, and very common in America and the West Indies. It has been particularly described by Hillary, Bancroft, Winterbottom, Schilling, Ludford, Horne, Mosely,

Adams, Rouchoux, Levacher, and Dazelle. We saw one very remarkable case of this complaint in the wards of Biett.

Frambœsia is characterized by the presence of small red tubercles, like vegetations, which are isolated at their summits, but collected together at the bases, and often resembling in colour and form raspberries or mulberries. It may occupy any part of the body, but most frequently attacks the scalp, face, axillæ, groin, margin of the anus, or genital organs. It is impossible to determine the duration of this disease; it is commonly proportionate to the state of the individual and the strength of his constitution: it may continue for years or even perpetually.*

Symptoms.—In the majority of cases there are no general precursory symptoms; in others, the patient experiences some malaise, with pains about the loins, after which the disease appears in the form of small dusky-red spots, like flea-bites, which are usually collected in groups. Each spot becomes the seat of a papular-like eminence, the epidermis soon exfoliates, the eminences become more prominent, and we now find a spot covered by a number of vegetations which are isolated at the summit and united at the base; they are indolent, and of a dull red colour. The tumours are sometimes circumscribed, and resemble raspberries or mulberries. In other cases they extend over a large surface, and in the one which we saw, the eruption occupied the anterior and lower third of the thigh; the epidermis was completely destroyed, and the disease seemed to consist in hypertrophy of the skin, which was raised into a great number of vegetations.

The parts in the neighbourhood of the diseased skin are hard, and the tubercles likewise firm, slightly inflamed, and generally covered by thin, dry, tenacious scales. Sometimes the inflammation is more severe, ulceration sets in, and a yellow or sanious fluid of a very nauseous odour is discharged. The discharge now collects between the tubercles, and forms scabs which may, for a time, conceal the real nature of the disease.

Such is the usual progress of yaws; but it is probable that there

[* Several of the characters of this disease resemble those of button scurvy, and indeed the latter affection has been described as a species of yaws; but on referring to the description of button scurvy in a preceding page, the reader will find it is a perfectly distinct disease.—B.]

are several varieties which, though differing from the present description, yet belong to the same disease.

Biett had a patient in his ward, labouring under a modified form of yaws; the tubercles were round and of a violet colour, varying in size from a pea to a nut; they were seated on the inner and lower part of the thigh, were collected in a circle, and formed a fungous eminence strongly adherent to the subjacent parts; around were numerous scars from old tubercles, and there were some recent ones on the back and instep.

Finally, in the last stage of the disease, one of the tubercles enlarges, ulcerates, and discharges a very acrid fluid, which corrodes the surrounding skin; in the colonies this is called the *mother yaw.* The disease may last for an indefinite period without any serious derangement of the health.

Causes.—Yaws appears to be a contagious malady; it is communicated through the matter discharged from the tubercles. Some have thought that it may be carried from one individual to another by flies, &c.; it is said to attack only once, and may arise spontaneously. Yaws occurs at all ages and in both sexes, but children are most subject to it. Atmospheric influences, the poor food, filth, and habits of the negroes seem to favour its development.* It attacks, in preference, persons of weak, lax fibre, and those who are scrofulous or rachitic; besides, it is almost exclusively confined to the black population.

Diagnosis.—The characters of this disease are extremely well marked; but it may not be amiss to state briefly the symptoms which distinguish it from syphilis, the more particularly as some writers have confounded them together.

In the general characters of the two complaints there is no resemblance whatever. They are both, it is true, contagious, and syphilis occasionally produces a tubercular affection; but it attacks whites as often as blacks, and never arises spontaneously. Syphilis also may occur an indefinite number of times, and the tubercular form is almost always attended by other signs of secondary syphilis.

Again, the particular appearance of tubercular syphilis is very

[* Since negro emancipation, this disease has become much rarer in our colonies.—B.]

different from that of yaws; in one we have the mulberry-looking tubercle, in the other indurations of a copper or violet colour, circumscribed, &c., and generally attended with various other symptoms of syphilitic contagion.

Nevertheless, cases of yaws are recorded which are evidently cases of pustular or tubercular syphilis. Whether they really are such we are unable to decide, at the same time that our experience of the disease does not warrant us in regarding it as a form of syphilis. Dr. J. Maxwell, who had much experience of this disease in Jamaica, regards yaws as the origin of tubercular leprosy, and mentions the following distinctive characters between syphilis and yaws.

1. Syphilis appears in six or eight days after contagion; yaws takes from six weeks to three months. 2. Syphilis may occur frequently from distinct infection; although yaws may occur oftener than once, from the susceptibility not having been destroyed, yet it cannot be communicated by future inoculation so as to display the disease in its normal state. 3. The constitutional symptoms of the venereal disease are generally progressive, and seldom disappear without the aid of medicine; the yaws generally admits of a spontaneous cure. 4. Syphilis is capable of affecting the fœtus in utero; yaws has never been known to do so. 5. Exanthematous eruptions and febrile affections have a temporary power in suspending yaws; not so in syphilis. See also an article on the nature of yaws by Dr. James Thomson, in the fifteenth volume of the *Edinburgh Medical and Surgical Journal*, p. 322.

Prognosis.—Yaws is not a dangerous complaint; it is less severe in the white than in the negro. Some forms of the disease are more obstinate than others; its duration is less when it attacks females or children, and its severity seems to be directly proportionate to the condition and extent of the eruption.

In mild cases, nature sometimes effects a cure; the tubercles gradually disappear: in the majority of cases, however, they ulcerate or yield to caustic applications, and leave indelible scars behind them. In other cases, they resist every means employed, and may continue indefinitely without serious injury to the health; or the disease may become constitutional, attacking the bones, and sometimes terminating in death.

Treatment.—The treatment of yaws is chiefly local, though certain internal remedies are highly spoken of. Sudorifics and purgatives are occasionally useful, but the main remedy is mercury. Some writers, however, pretend that mercury is not only useless, but may aggravate the disease, and that the cases in which it succeeds were examples of syphilis mistaken for yaws. The peasantry, especially the negro women, employ sudorifics with benefit, to "drive the disease to the surface," as they term it, and afterwards add to the usual remedies for this purpose, guaiacum and sarsaparilla.

In all cases we must confine the patient to a proper regimen, and, if he be of weak or scrofulous habit, administer some tonic. It is probable that some of the preparations of arsenic might be administered with advantage. As an external application, the ointment of the proto- or bin-iodide of mercury should be had recourse to. When these means fail, we must employ more powerful remedies, and apply, as a caustic, the arsenical paste, or the binitrate of mercury. Biett employed the actual cautery with complete success in a very severe case, where every other means had failed.

The arsenical paste (of Frère Côme,) is an excellent remedy, and we have seen Biett use it for other diseases, without the slightest inconvenience; but it should never be applied over a surface larger than a half-crown piece. The binitrate of mercury also acts powerfully, and should be sparingly used.

Finally, the remedies just mentioned may be followed up by vapour baths and douches.

MOLLUSCUM.

Syn.—*Mycosis fungoides* of Alibert.

The disease of which we are now about to speak, has been called *molluscum*, from the similarity of the tubercles which characterize it to the eminences that grow on the bark of the maple tree. We know little of the history of this disease, which was first noticed by Bateman. Molluscum consists in the presence of numerous small tubercles varying in size from that of a pea to a pigeon's egg; they

are round or flattened, and irregular; sometimes seated on a broad basis, at others they are attached by a peduncle; in a few cases, they are of a brown colour, but generally preserve the colour of the skin. They grow very slowly, and may last during the whole period of life; they occur chiefly on the face and neck, but may cover the whole body. Bateman divides this disease into molluscum contagiosum and molluscum non-contagiosum.*

The non-contagious species, consisting in indolent tumours of variable size and form, and frequently pedunculated, is less rare than the contagious. Writers, however, are not agreed on the true nature of the disease. Silesius published a very remarkable case, in which the face and body were covered by small tumours, containing an atheromatous substance. Biett had seen several cases of the same kind, but the tumours were solid. In a patient affected with prurigo senilis at the Hospital of St. Louis, we saw a number of those small tumours spread over different parts of the body; the largest was as big as a nut, the rest not larger than peas; they seemed to be formed of dense fibrous substance, and were not painful to the touch.

Biett observed another species of non-contagious molluscum, occurring chiefly in young puerperal females; here the tumours are small, flattened, slightly divided at the summit, irregular in form, and of a brown or yellowish colour; they chiefly occupy the neck.

Contagious molluscum is a very rare disease: it has not been met with in France, and Bateman saw two cases only. It consists in round, prominent, hard tubercles of various sizes; the tumours are smooth, transparent, and discharge a whitish fluid from their apex. One of the cases described by Bateman occurred in the person of a young female; her face and neck were covered with numerous small tumours, some not larger than pins' heads, others as large as small beans; they were hard and semi-transparent, their surface smooth and shining, and their colour nearly the same as that of the skin; they were slightly contracted towards the base. On pressing the largest of the tumours, a milky fluid was discharged through a central opening which had not been visible previously. The disease

[* There are also in this disease several characters similar to those of button scurvy, especially in the contagious form of the disease.—B.]

had existed for a year, but only a small number of the tumours had continued to increase: some of the latter appeared to be on the point of suppurating. The patient's health was bad, and she had become very thin since the development of the cutaneous affection. The disease was communicated from a child whom the woman nursed, and on inquiry it was found that the child took it from a servant who had it on the face.

In the second case mentioned by Bateman, the complaint had been communicated from one child to another. Dr. Carswell has brought under our notice a remarkable case of molluscum, similar to those related by Bateman: he observed it at Edinburgh, with Dr. Thomson, in a child at the breast, who had taken it from his brother, the latter having taken it from a schoolfellow. The disease passed from the infant's face to the mother's breast, and also attacked two other members of the family. The child died, but no examination of the body could be obtained: the symptoms of the disease in these cases were the same as those given by Bateman.

Causes.—Upon this point nothing positive is known.*

Diagnosis.—The form, colour, and progress of the tumours will enable us to distinguish them from the tubercles of syphilis, yaws, or elephantiasis of the Greeks. The contagious species is easily distinguished from the non-contagious one; and if we had a sufficient number of accurate observations of the two species, we would probably find that they bear little resemblance to each other.

Prognosis.—The prognosis of the non-contagious variety is favourable: the progress of the tumours does not seem to depend on any constitutional derangement; they seldom produce irritation, and, after a certain period, become stationary for the rest of life. Contagious molluscum is a much more severe and rebellious affection.

Treatment.—We know so little of this disease, that it is difficult to say anything satisfactory of the treatment. Biett has employed a great number of remedies in cases of non-contagious molluscum. In the first variety he was unsuccessful: in the second, he found some benefit from stimulants and styptic lotions: in one case, where several tumours occupied the neck of a young female, he obtained a

* [Dr. Smith, of Philadelphia, considers this disease to be an obstruction of a fibro-scirrhous or medullary degeneration of the sebaceous follicles.]

complete cure in a few weeks with a lotion containing the sulphate of copper. Finally, Bateman has given the preparations of arsenic, and particularly Fowler's solution, with benefit, in contagious molluscum.

[Drs. Paterson and Henderson, of Edinburgh, have recorded several cases of molluscum which came under their observation.* In Dr. Paterson's cases, the tumours had central apertures, and emitted a milky fluid when pressed. In one case, in a child, the tumours, as they enlarged, suppurated and fell off. Each tumour contained numerous quadrilateral-shaped cells, arranged round a central cavity, and secreting a milky fluid, which escaped from the interior of the cells into the central cavity, by which it was conducted to the opening. The milky fluid contained nucleated cells, about three and a half times as large as blood corpuscles, and having no resemblance to the contents of sebaceous follicles in health or in disease. These tumours commenced as minute pearly granulations; the opening formed afterwards. The fluid was not inoculable. Dr. Henderson states that in his cases every tumour, even the smallest, had an opening. The entire mass was lobulated. In the interior there were cells arranged round and projecting into a common centre.—B.]

* Vide Edin. Med. and Surg. Journal, vols. 56 and 69.

MACULÆ.

SYN.—*Dermatoses dyschromateuses* of Alibert.

IN addition to the various inflammatory affections already described, the skin may be the seat of certain changes of colour which merit attention. In speaking of these changes, we shall confine our description to such as are really connected with the tegumentary system, omitting those which, like chlorosis and jaundice, are merely symptomatic of some other and more deep-seated disorder. Hence, under the order Maculæ, we shall include those diseases only which depend on some alteration of the colouring matter of the skin: they are characterized by *change* or *absence* of the natural colour of the skin, giving rise to spots of various appearance and different size.

Maculæ are either general or partial: the latter, it is true, may cover nearly the whole of the body, but then they are separated by intervals of normal-coloured skin; sometimes they occupy one region only, as in *lentigo*, when confined to the face; in other cases, *nævus* for example, we have a single spot. The duration of this order varies with each species; when the disease is congenital, or spread all over the body, it generally lasts for an indefinite period; the *ephelis* is the only species to which a definite duration can, in a certain degree, be attributed.

Maculæ appear to be principally seated in the rete mucosum, and they evidently depend on some alteration of its colouring matter. It is, therefore, important to distinguish them from those changes of colour which depend on the vascular system, or on the presence of colouring matter in the blood; for we cannot but think that ephelis and icterus, vitiligo and chlorosis, differ essentially both in their seat and nature.

Causes.—The cause of most species of maculæ is totally un-

known. We are aware, for example, that the skin assumes a general bronzed tint after the administration of nitrate of silver, but as yet neither chemists, anatomists, nor practitioners have been able to explain this curious phenomenon. We are equally in the dark as to the cause of nævi materni, and must be contented for the present with the popular opinion which attributes them to impressions made on the mind of the mother. These effects are often imaginary, and often referred to a cause which is transient in its nature, and only thought of when attention is directed to it. Still there are authentic cases in which there was such an exact correspondence between the object by which the mind of the mother was impressed during pregnancy and the mark on the child, that we are tempted to admit that a certain degree of influence may be exerted on the fœtus by impressions during that period. Ephelides appear under the influence of a cause which we can, up to a certain point, appreciate.

Diagnosis.—Maculæ are easily distinguished from all other diseases of the skin, and the symptoms peculiar to each variety will readily enable us to recognise them. Certain *syphilitic* spots, it is true, resemble maculæ, but we shall point out the difference in speaking of the former.

Prognosis.—Treatment.—Though generally incurable, these affections are never immediately dangerous, and seldom injure the health. The species which admit of cure, commonly yield to simple remedies; of the others we know so little, that the failure of our therapeutic means is not much to be wondered at. We shall divide maculæ into those accompanied by *change* of colour, and those characterized by *absence* of colour.

CHANGES OF COLOUR.

These are either general or partial, the *bronze* colour constituting the only general change; *lentigo*, *ephelides*, and *nævi*, the partial ones.

SLATE-COLOURED SKIN.

It sometimes happens that the skin ssumes, more or less sud-

denly, a bronze or slate-colour; this especially occurs after the internal use of nitrate of silver; but the change of colour may manifest itself in persons who have never employed this remedy; we have seen several cases where the disease could not be attributed to any known cause, and Biett mentions many others of the same kind. The skin, however, in these cases is much less dark-coloured than when nitrate of silver has been taken: it has rather a dirty tinge than a deep hue.

In cases succeeding the use of nitrate of silver, the skin assumes a greyish slate-colour, deepening into green under the influence of light. Biett, who employed the nitrate of silver with success in several cases of epilepsy, has often had occasion to observe this effect on the skin. The change of colour usually commences some considerable time after the employment of the remedy; the skin first assumes a bluish tinge, which gradually becomes a light bronze colour, particularly in the parts exposed to light. The whole body is attacked at the same time, but the colour is deepest where the skin is most fine and exposed: in some cases it gets nearly black. The conjunctivæ, and the line of junction between the mucous membrane and skin, are generally of a livid copper colour.

It is worthy of notice, that the colour of the face becomes deeper under the influence of causes which, in the natural state, would have produced paleness, and *vice versâ.* The disease may last for a considerable time, or even during life. Biett saw two persons at Geneva, in whom it had continued for twenty years without any diminution. For the last fourteen years he had been in the habit of frequently employing nitrate of silver for epilepsy; and in many of his patients the discolouration continues unabated. It sometimes diminishes gradually, but there is no example of its having completely disappeared. The general health is never deranged, nor is there any change in the tissues intimately connected with the skin; the hair remains intact, but the nails have commonly a bluish tinge. Old cicatrices usually present the same bronzed colour as the skin, but those which arise from wounds inflicted after the appearance of the disease, are white.

The discolouration of the skin now under consideration has been observed by a great number of medical practitioners who have employed the nitrate of silver in the treatment of epilepsy.

Fourcroy was the first who directed attention to this point; since his time, we may cite the names of Powell, Marcet, Roget, in England; Albers, Reimar, Schleiden, in Germany; Butini, Delarive, and Odier, in Switzerland; and of Biett, in France. the latter gentleman has had twenty-two cases under his care, (fifteen males, and seven females,) without counting those which he had seen in England and Switzerland. In most of these cases time had no influence on the disease.

We may now ask, how does the nitrate of silver act on the colouring matter of the skin? Does the effect of the remedy depend on some chemical combinations produced through the agency of light? We are unable to tell; the theories hitherto advanced are not satisfactory; and most of the questions on this point, addressed by Albers, of Bremen, to the Medico-Chirurgical Society of London, still remain unanswered.

We are not acquainted with any remedy for this disease; every mode of treatment hitherto adopted has failed. The stimulating baths, recommended by some writers, can produce no effect; Biett tried them, in some cases without success. Blisters also fail, though an English author pretends that they restore the skin to its natural colour. Biett has proved this to be erroneous. It is probable, however, that successive blisters might have some effect, but it is evident that so severe a remedy could never be applied to the face, or other exposed parts of the body.

[Dr. Paterson, who instituted a series of experiments, with a view to clear up this subject, considers that the nitrate of silver is readily decomposed by the saliva, by the simplest articles of diet, and by the healthy and diseased secretions of the stomach itself; so that it cannot pass into the circulation as the nitrate, but in some other combination, (the chloride, perhaps,) to which must be attributed its beneficial and curative effects in epilepsy, &c. Dr. Paterson attributes the discolouration to the decomposition of the chloride of silver circulating in the cutaneous tissues, through the chemical action of the sun's rays, and the deposition there of its metallic basis in a state of extreme disaggregation. Persons of a fair, delicate skin are much more liable to it than others. Dr. Paterson's researches lead him to believe that the iodurет of silver might be

advantageously substituted for the nitrate;* and, as the sun's rays have not any decomposing influence on that salt, it is not likely to produce the discolouration above mentioned. He has found a solution of hydriodate of potash to remove the stain on the skin produced by the external application of the nitrate of silver, and that nascent iodine will remove the writing of indelible marking ink, made with the nitrate; hence he supposes that the cutaneous discolouration may be removed by the internal and external employment of the preparations of iodine.—B.]

LENTIGO.

Syn.—*Ephelis lentiformis; Pannus lenticularis;* Freckle; Sunburn.

Lentigo is characterized by the presence of small spots, of a dusky yellow colour, never larger than a lentil, and often much smaller. It is frequently a congenital disease, but sometimes appears about the age of nine or ten, and continues during the rest of the patient's life. The spots are of a deeper colour during youth, and usually occupy the face, front of the chest, neck, and hands. The parts exposed to light are thus the usual seat of this affection, but it may extend over the whole body.

Symptoms.—The spots of lentigo are round, of a yellow colour, sometimes very bright and irregularly scattered over the skin; on the neck and cheeks they often run into one another, and form large discolourations. They do not rise above the level of the skin, are not attended by pain, or even itching, and rather cause a disagreeable appearance than constitute a disease.

Causes.—Lentigo generally occurs in persons with a fine white skin and light or auburn hair: it is rarely seen in the dark-complexioned. The action of the sun sometimes excites it, and in such case may disappear in time, or with a change of climate. It is most common in warm countries, and in persons of lymphatic temperament, rarely occurring in those of vigorous and plethoric constitutions. It is generally a congenital affection.

Diagnosis.—When seated on the body, lentigo might sometimes

[* The oxide of silver has been recently recommended as a substitute for the nitrate, and is said to cause no discolouration of the skin.—B.]

be mistaken for a species of *purpura*. The latter occasionally appears in the shape of small round spots, like those of lentigo; but they are of a livid red colour, while in lentigo they are yellow; they may exist on the trunk and limbs, without appearing on the face, which rarely happens in lentigo; finally, they last but a certain time, and are generally accompanied by some derangement of the health, while those of lentigo remain for life, and never cause any unpleasant symptom.

When several spots of lentigo are united together, they may be mistaken for *ephelides;* but the presence of small round maculæ, their duration, and the absence of pruritus, are sufficiently diagnostic signs. Lentigo sometimes disappears of itself; sometimes continues during life; but as it is not, properly speaking, a disease, it requires no treatment.

EPHELIDES.

SYN.—*Pannus hepaticus; Cloasma;* Liver spots.

Ephelides are irregular spots, of a yellow saffron colour, much larger than those of lentigo, often attended by itching, and sometimes terminating in a slight exfoliation of the cuticle. They may occupy any part of the body; but generally the front of the neck, chest, abdomen, axillæ, and groin; they seldom appear on the face, except in pregnant women. They may continue for a few days only, or for one, two, or more months; they sometimes appear spontaneously, and disappear quickly, as at the period of menstruation; but in most cases they are developed slowly, and, if not submitted to proper treatment, may persist for several months.

Symptoms.—The first symptom is a slight degree of itching, which is soon followed by the appearance of small round spots; these are, at first, of a greyish colour, but gradually assume a yellow tinge, sometimes deepening into saffron. The colour, however, varies much with the individual, and the seat of the affection. At the commencement, they vary also in size, but gradually become more numerous, congregate together, and form extremely large spots, covering a great surface of the skin; they are not prominent,

nor are they attended with any symptom, except troublesome itching. The patches are sometimes so large, that at the first glance the morbid colour might be mistaken for that of the skin itself, and the few points where the natural colour of the skin remained be taken for the discoloured parts. The itching is augmented by the least error in diet, or moral impressions; it is likewise increased at the menstrual period, and by the heat of the bed, being sometimes carried to such a degree as to deprive the patient of sleep. Ephelis may pass away in a few days, or in a few hours, but in other cases its duration is much longer.

Causes.—This affection occurs indifferently in both sexes, but chiefly in women of fine white skin; in dark-complexioned females the spots are of a deeper colour. They may be produced by the action of the sun, errors of diet, the use of salt meat, &c.; and often coincide with the suppression of some habitual discharge. As ephelis sometimes occurs in persons labouring under a chronic disease of the liver, it has been attributed to the latter; but the coincidence is rare, and the cutaneous disease is not necessarily connected with the disorder of the liver. In the majority of cases, persons affected with ephelis enjoy excellent health, the disease merely consisting in some change of the colouring matter of the skin. It is this which constitutes the mark sometimes seen on the faces of pregnant women.

Diagnosis.—This is generally easy; but ephelis may be confounded with pityriasis, syphilitic spots, or some nævi.

Pityriasis.—*Pityriasis versicolor* is a scaly disease; the desquamation is formed by layers of altered epidermis, while in some rare forms of ephelis we have a slight farinaceous exfoliation. Still the diagnosis may be difficult when the former is attended with a yellow tinge; it never, however, presents the pruritus constantly existing in ephelis.

Venereal spots.—The livid, copper-coloured spots, the absence of desquamation and itching, the previous history and attendant symptoms, will always serve to distinguish spots depending on a venereal taint. Some nævi of a dark yellow colour, and not elevated above the surface, may resemble ephelis, but they may be distinguished by their being few in number, or single, by the absence of itching, their being congenital, and incurable.

Prognosis.—Ephelis is a very slight affection. The spots which appear during pregnancy soon fade away, but should they persist, they require no treatment; the same remark is applicable to ephelis when connected with menstruation. Otherwise it causes no inconvenience farther than a considerable degree of itching, which is usually removed by appropriate treatment.

Treatment.—Astringent and stimulating applications, intended to give tone to the skin, are useless, and may prove injurious. A more simple treatment is all that is required. Some sulphureous water, as that of Enghien, or Cauteretz, or Harrowgate, may be given internally, with two or three sulphur baths every week, the bowels being kept open by laxative medicine. This treatment is generally successful. When first administered, the Enghien water should be diluted with two-thirds of milk or barley-water, and the quantity of the sulphureous water gradually increased until it can be taken pure. When the spots occupy the inside of the thighs, groins, &c., and cause severe pruritus, it may be useful to apply, alternately with baths, a lotion, containing an ounce of sulphuret of potass to a quart of water. It is scarcely necessary to add, that the patient should avoid all excess in diet, and abstain from stimulating fluids.*

NÆVI.

SYN.—*Spili; Maculæ maternæ;* Mother marks; Moles.

Under this head are comprehended all those congenital discolourations of the skin which are commonly attributed to impressions transmitted from the mother to her child. In some cases the spots (*spili*) evidently consist in an alteration of the colouring matter of the skin, and are not raised above its level; they may occupy any region of the body, but most frequently the face. Their

[Dr. Lilienfeld recommends, for the removal of these stains, warm soap-suds baths, used for three or four days, to soften the skin. The spots are then to be washed every night on going to bed with the tincture of hellebore (*Veratrum album*), and in the morning washed with a piece of flannel, wet with warm soap-suds. The tincture of hellebore should be prepared with the fresh root. He says that the spots begin to fade after three days' treatment, and soon disappear altogether.—*Bull. Génér. de Thérap.*, Jan. 1850.—B.]

colour may become less bright, but they never disappear completely; and they assume such a variety of tints and forms that it is impossible to comprehend them all in a general description. They are, however, commonly of a yellowish colour, or black, and in the latter case are covered by short, stiff hairs. They are of irregular form; but sometimes resemble, in a very curious manner, the shape of certain objects. They may be small, or occupy a considerable surface, as one-half the face, a whole limb, or a great part of the body. They occasion no pain, and are not attended with itching.

Another form of nævus is connected with the vascular system, and may be divided into two species. In the first, the spots are entirely superficial, and are under the influence of the circulation. They are commonly red or purplish, and become deeper from mental impressions, errors of diet, at the menstrual periods, &c. The skin sometimes appears to be slightly swollen. In the second species they are more or less elevated above the skin, oblong, flattened, or pediculated, and constitute the erectile tumours of Dupuytren. Finally, writers have described, under the name of *moles*, small brown spots, which are either superficial or slightly prominent, perfectly round, rarely larger than a lentil, and generally surmounted by a few hairs. They seem to be intermediate between *spili* and *nævi*, but are more allied to the latter, for they sometimes excite itching, swell, and become painful on the least irritation. They are generally congenital, but sometimes occur after birth. We are quite ignorant of the proximate cause of nævi; and even admitting the vulgar idea of maternal influence, which certainly does not exist in a great majority of cases, we still would have to account for their mode of origin. Some authors think that nævi are more frequent in the children of women who have been subject to inflammatory affections of the skin; but, even if this were the case, it would throw no light on their origin.

Nævi, generally speaking, require no treatment; the first species (*spili*) may be abandoned to nature. We could only destroy them by the knife or by caustics; but the resulting scars would be more disagreeable than the original disease. The treatment of vascular nævi belongs exclusively to the surgeon, and consists in the use of pressure, ligature, removal by the knife, or the ligature of the

vessels which supply the tumour. The cautery seems to be too dangerous a remedy in cases of this latter kind.

LOSS OF COLOUR.

The absence of the colouring matter of the skin may be congenital or accidental, general or partial.

ALBINISMUS.

Albino-skin.

This affection consists in a general and congenital absence of colouring matter in the skin, and is the more remarkable that *albinos* do not constitute a separate race of men, but are found amongst all nations.

The skin of the albino is of a dull white colour, like that of milk; the hair is smooth and silky, like the silvery clothing of the goat, and sometimes of a snowy whiteness. The eyebrows, eyelashes, and beard, and the hair in the axilla and on the genital organs are of the same colour; the whole body is besides covered with a woolly down of a snowy whiteness, and remarkably soft. The iris is of a rose colour, and the pupil deep red; circumstances which depend on the absence of pigment in the choroid and uvea. The eyes of the albino are unable to sustain a strong light, under the influence of which the lids contract perpetually, and the pupils oscillate in a very rapid manner; at the approach of night they see distinctly. The moral and physical constitution of the albino corresponds with the weakness of his organization. He is generally weak, small, and delicate, and the intellect dull. Several idiots are albinos. There is no example of the occurrence of this state accidentally; its primary cause is completely hidden from us. Though more common in some parts of the world than in others, it occurs in every climate and amongst all races of mankind. The characters of this peculiar state are too well marked to render its diagnosis doubtful. It is beyond the reach of our art, and requires no treatment.

VITILIGO.

Syn.—*Achroma; Achrome vitiligine.* Want of skin-pigment.

The skin is sometimes the seat of a partial decoloration, or absence of colour, constituting an affection known by the name of *vitiligo*, which has been confounded with diseases entirely different from it. The *porrigo decalvans* of Bateman is a certain form of vitiligo, that is, an essential absence of colour of the skin complicated with an alopecia of a peculiar kind.

Vitiligo is, then, an especial and partial decoloration of the skin, and may be either congenital or accidental. The first of these forms occurs only among negroes, on different parts of whose bodies white spots of various shapes and size are sometimes found, and who are then called *pied negroes.* When these patches are on parts covered with hair, that is also white.

Symptoms.—Vitiligo is most frequently accidental, and, indeed, this is the only form which affects white persons. It may appear on any part of the body. On parts not covered with hair, it is characterized by smooth patches of a milk-white colour, usually of a circular form, but sometimes in longitudinal striæ or streaks. Its development is unattended with either heat or itching, and its most frequent seat is the scrotum.

When on the hairy scalp, without any precursory heat or itching, the hair begins to grow thin on a certain part, and a whitish spot is soon seen indistinctly defined, and losing itself in the surrounding healthy skin. The decoloration and alopecia progress together; and when the disease is fully developed, it consists of an entirely bald spot, of a remarkably milk-white colour and with a smooth and shining surface, and with limits so perfectly defined that the hair about its borders is as strong and thick as on any other parts of the head. There may be several spots, and they may extend and become confluent, and thus cause baldness of the greater part of the head. The disease may affect any part of the scalp, but occurs more frequently on its posterior portion. It usually lasts for some time; sometimes for years. It may appear on all parts covered with hair, and presents the same character as on the scalp.

Causes.—Vitiligo occurs at all ages, but more frequently from twenty to thirty years, and is more common in females than in males. It seems to be connected with the lymphatic temperament; but it is difficult, if not impossible, to ascertain its causes. It is never contagious.

Diagnosis.—The characters of vitiligo are very distinct and easily recognised. When on the hairy scalp, the baldness which it produces might be confounded with that resulting from favus; but in vitiligo the skin is colourless, retains its normal thickness, and is always covered with a kind of down; while in favus, the skin is thin, it has a peculiar colour, and is entirely destitute both of down and of hair. We should not confound it with the white lines which are found on the mammæ or abdomen of women who have been pregnant or affected with dropsy, &c.; for the latter depend on laceration of the rete mucosum from over distension of the skin.

Treatment.—We have seen several cases of vitiligo in the wards of Biett at St. Louis; but the means employed in the treatment of this affection were never attended with benefit. Fortunately, it is one which calls for little interference on the part of the medical man.

DISEASES

WHICH DO NOT ADMIT OF BEING ARRANGED UNDER ANY OF THE PRECEDING ORDERS.

LUPUS.

SYN.—*Lupus vorax; Herpes exedens; Formica corrosiva.*

Lupus commences with violet-red spots, or more frequently livid, indolent tubercles;* the chief character of which, is their tendency to end in destructive ulceration of the surrounding parts, and even of the subjacent tissues, forming ichorous and ill-conditioned ulcers, giving rise to brownish and usually very adherent scabs, which are followed by fresh destruction after they fall. It presents great varieties in the seat, progress, and extent of the ulcerations, and also in its mode of destruction and the form of the subsequent ulceration. Sometimes they run along the surface of the skin; sometimes destroy the subjacent tissues. Sometimes lupus is attended by hypertrophy. Hence, Biett described three principal varieties: 1. a form which destroys the surface only (superficial lupus); 2. one which destroys deep-seated parts, (deep-seated lupus); 3. lupus with hypertrophy. These distinctions, which are founded on practice, will facilitate our description of the disease.

The most common seat of lupus is the face, and it attacks the nose more frequently than any other part of the body; but we are unable to explain this peculiarity. The cheeks, lips, and chin, are the parts most subject to it, after the nose. It may, however,

[* It is to be regretted, considering the now universal application of the term tubercle to designate a special morbid product, that some other word cannot be devised to supersede the tedm "tubercular," as applied to certain skin diseases merely from their external form.—B.]

attack any other portion of the body; for the trunk, we generally find it seated on the chest or shoulders; for the limbs, on the neighbourhood of the joints, the external surface of the fore-arm, the back of the hand, or the dorsum of the foot. In some cases it attacks the neck. It may be confined to a single point, or attack several points simultaneously, or spread to several parts of the body. The first sign of this disease is, generally, a dull red, small, hard, eminence or tubercle, which increases slowly, and seems to occupy the superficial layer of the skin. The summits of the tubercles are occasionally covered by white dry scales. In many cases several tubercles unite together, and form a soft indolent tumour, which terminates, after an uncertain period, in ulceration.

This is the usual way in which the disease commences, but it is certain that tubercle is not the elementary lesion of lupus. It sometimes begins with inflammation of the mucous membrane of the nares, attended by redness and tumefaction of the nose. A small crust forms on the part, and is scratched off. A second scab appears, and ulceration has now set in. In other cases, we find a purplish spot, with slight tumefaction, on some part of the face, but chiefly on the tip of the nose. For several months the colour becomes deeper and brighter; then appears a slight ulcer, covered by a scab, and the ulceration gradually extends in length and depth. Finally, in some cases, the skin gradually gets thin and looks like a cicatrix, without tubercle, ulceration, or any other lesion, except a livid spot, from which the cuticle occasionally scales off.

1. *Superficial lupus.*—This form of the disease presents some varieties which are worthy of notice. In a few rare cases it seems to be confined to the most superficial layers of the dermis, and occupies chiefly the face and cheeks. There are no tubercles or scabs, but the skin assumes a reddish tint; the cuticle exfoliates, and the integument gradually becomes thin. It is now red and shining; and, finally, looks like a cicatrix after a superficial burn. The redness disappears under pressure with the finger, which gives rise to pain, although not painful when not touched. After violent exercise, or excess in spirituous liquors, the affected surface becomes sensitive. When the progress of the disease is arrested, the redness disappears, the epidermis ceases to exfoliate, and the

skin remains thin and shining. This is the form to which Biett gave the name of *erythema centrifugum.* In other cases, several small soft tubercles, of a dull red colour, form under the skin; they remain indolent for some time, then suddenly increase, become numerous, and the skin which separates them is slightly tumefied. They now unite at the base, ulcerate at the points, and form an irregular, ill-conditioned ulcer, covered by a dark tenacious crust, which gradually spreads to the neighbouring parts. When the disease extends in this manner, we find several white, irregular lines of cicatrix, like those from large burns, forming on the original seat of the complaint. They generally occur after treatment has been employed.

Lupus may thus attack very extensive surfaces of the body; the whole face, for example; the cicatrized parts, being surrounded by tubercles, often give way. It is always by the formation of new tubercles which circumscribe the ravages of lupus by an indurated, rough, and swollen border, and which afterwards ulcerate, that the disease advances. We saw a patient at St. Louis in whom the disease commenced in the submaxillary region: thence it gradually extended, in spite of treatment, to the neighbouring parts; and, in a few years, had reached the chin, a great portion of the cheeks, and all the front of the neck. In some cases, the tubercles commence at the angles of the mouth; the ulcers are covered by thick scabs, and the patient finds much difficulty in opening his mouth.

The nose is seldom the primary seat of this variety of lupus, but it is attacked in its turn, and the ulcers frequently destroy the sides or extremities of this organ. By proper treatment, however, the formation of fresh crusts may be prevented. The surface is sometimes rough, and covered with small red tubercles. In other cases it is lined with furfuraceous scales, like those of the epidermis, which fall off, and leave a white cicatrix underneath. In this state, when the ravages of the disease have been extensive, the face presents a very remarkable appearance; it is covered with irregular scars, some of which are of a pale red colour, tense, and shining; thick in some points, but in others so thin that they appear to be on the point of giving way altogether. The latter appearance exists in the parts which have been frequently destroyed by repeated ulceration. In almost all cases these scars are united to the base

of tubercles from which they seem to spring. Sometimes the edges of the scars are partially covered by dark tenacious scabs. This variety may also occupy extensive surfaces of the body.

2. *Deep-seated lupus.*—This form generally occurs on the sides or extremity of the nose. It is often preceded by redness and tumefaction of the part, with coryza. One of the alæ of the nose swells, gets painful, and is of a violet-red colour. A slight ulcer now forms, and is covered by a thin scab; this is removed; another scab forms, which is thicker, and each time a portion of the substance is destroyed. The redness and tumefaction often extend over the tip of the nose to the other ala. The affected parts are now covered by a scab, which gradually increases in thickness. The patient suffers little. The skin and cartilages of the nose are destroyed underneath the scab; and when the latter falls off, we find an ill-conditioned ulcer underneath, discharging a quantity of sero-purulent fluid. Some fœtid matter, likewise, is often discharged from the nose. In other cases we have no tumefaction or coryza, but a single red, smooth, soft tubercle, which terminates in ulceration.

The extent of parts destroyed is very variable. In some cases the whole nose is eaten away; in others only the point. But, as the new tubercles form on the scars, fresh ulcerations occur, and the surrounding spots are extensively involved. Sometimes the superficial tissue of the nose only is destroyed, giving it a pointed appearance. The nares have a tendency to become closed up, and are of a red colour, except at the superior angle, where the cartilage forms a yellow line. This tendency is more evident in cases of lupus with hypertrophy. In other cases, the nose looks as if a portion were removed with the knife.

The destruction of parts is not proportionate to the duration of the disease. Sometimes the whole nose is destroyed in ten or fifteen days, at others, a small portion only has been removed at the end of several years. We saw a very rapid case in the wards of Biett; a woman, thirty-six years of age, had lost a part of the left ala, but the disease had been arrested by cauterization. The extremity of the nose assumed, from time to time, a livid red colour; scabs, with purulent discharge, formed in the nares. The livid tint occasionally disappeared, at other times was very marked. There were no tubercles. The livid colour, however, became deeper,

and ulceration set in. The scab became thick within a few days. The patient experienced severe pain; and in five or six days, when the scab was removed, the extremity of the nose was gone. The disease was again arrested by the bi-nitrate of mercury; but three weeks afterwards, the cicatrix assumed a deep red colour, and ulceration again set in. A red and very painful point was now seen on the right side of the upper lip. A thick scab formed here, and in a fortnight a portion of the lip was destroyed. As every other means failed, Biett again had recourse to cauterization with the arsenical paste, which succeeded. This case illustrates the rapid progress of lupus, and shows that it is not always attended with tubercles. A morbid redness and slight swelling of the extremity of the nose, were all the precursors of the ulceration and destruction of the part; and on the upper lip, the redness preceded the ulceration only a few days.

In almost every case of lupus, when seated in the nose, the mucous lining of the nares is attacked, and sometimes the septum is destroyed even before the external parts; in other cases the disease spreads from the skin to the mucous membrane, and destroys successively the lining of the nares, palate, and even the gums. This form of lupus often spreads to the face also, and produces more or less destruction of parts.

3. *Lupus with hypertrophy.*—This form generally commences on the face, with soft, indolent tubercles; they are numerous, slightly prominent, and occupy a considerable portion of the cheek or face, to which they are usually confined. They rarely ulcerate at the summits, but the base enlarges, and the subjacent cellular tissue becomes engorged. After a certain time, the whole face is covered with red points, and here and there we see a few white spots from the scars of old tubercles. The existence of the scars is very remarkable, for the tubercles which they replace seem neither to have ulcerated, nor to be covered with scabs; they appear to be removed by successive desquamations. The face may acquire a most extraordinary size in some cases of this disease, the soft, hypertrophied cheeks, assuming somewhat the appearance of elephantiasis. The eyelids and skin of the forehead hang over in folds, and the eyes are concealed in the orbits; the lips form two enormous masses of flesh, and the ears are occasionally involved in the same condition.

The tubercles, as we have already said, are rarely the seat of ulceration; those ulcers which do occur are slight, and covered by a thin, tenacious scab. The surface of the tubercles is dry, of a bluish colour, and generally the seat of exfoliation.

This disease may continue for an indefinite period of time. When, after judicious treatment, the affected parts begin to assume a healthy condition, the swelling gradually subsides, and the tubercles diminish; the circulation through the vessels of the skin becomes more active, and the integument gradually assumes a healthy appearance, although it is seldom completely restored to its original state. In another form of lupus with hypertrophy, the ulcers are covered by small, soft, fungoid tumours, which are very prominent, and give the face a disgusting appearance. This variety is usually a serious one.

The different varieties of lupus may co-exist in the same subject, or even be mixed up together. When the latter occurs, the case is of a most formidable nature; the lower eyelid is frequently destroyed, and the skin of the face is continous with the conjunctiva. Under such circumstances, the eye is attacked by chronic inflammation, the cornea becomes opaque, and vision is completely lost; or the eyelid is averted from partial destruction of its tissues. In other cases, when the thick scabs are detached from the nose, we find ulcers, surrounded by hypertrophied tissue, which latter closes up the opening of the nares, unless great care be taken to prevent such an accident. Finally, in some cases, the angles of the mouth and a portion of the lips are destroyed, and the scars which ensue not only cause more or less deformity, but considerably diminish the aperture of the mouth. Notwithstanding these local ravages, the general health of the patient remains unchanged, though occasionally menstruation seems to be deranged when the disease is very extensive.

Lupus is often accompanied by erysipelas of the face; this, instead of being an evil, is frequently a fortunate occurrence. We have often seen erysipelas produce the most favourable effects in cases of lupus with hypertrophy, the disease terminating in a rapid and unexpected manner. In the most severe forms, when the substance of the skin, cartilages, and bones, have been extensively destroyed, the patient is cut off by chronic gastro-enteritis, with slow fever and colliquative diarrhœa. This fatal termination

is, however, very rare, and the disease may continue for years, destroying successive portions of the healthy skin, or the parts already attacked by it. Lupus may attack the nasal cartilages, and leave the bones untouched; indeed, it seems to select the skin, in preference to all other tissues. We have seen many patients at St. Louis, who had laboured under this affection for years, and seldom witnessed destruction of any part of the osseous system, except the bones of the nose. These have sometimes entirely disappeared, leaving only a triangular opening, divided into two parts by the remaining portion of the septum.

Causes.—This disease occurs most frequently amongst children and adults: it seldom attacks persons beyond the age of forty years; both sexes are equally liable to it. We meet it more frequently in the country than in towns, and in children of a scrofulous habit; it may recur at the period of puberty in persons attacked during their childhood. On the other hand, lupus occurs in persons enjoying excellent health, and in the vigour of youth. Lupus with hypertrophy is the form most closely connected with the scrofulous diathesis.

[*Nature of lupus.*—Is lupus a local disease, or merely the outward manifestation of a vitiated state of the constitution? Many excellent writers on cutaneous pathology adhere to the latter opinion, and yet admit that constitutional treatment fails signally when employed without the aid of local remedies. How then are we to reconcile the curious pathological anomaly of a constitutional disease being only remediable by local measures? Most of the French dermatologists regard lupus as a scrofulous disease in the great majority of cases, whereas other writers on cutaneous pathology do not even allude to that circumstance. The poor inhabitants of Haute-Auvergne, who live on acrid food, such as old cheese, tainted meats, &c., and house with their cattle, are often attacked with it. The French writers, however, admit that it sometimes occurs in persons of robust habit of body, and in the enjoyment of excellent health. Mr. B. Phillips, who has had much experience of this disease, says that it shows a predilection for scrofulous subjects. Plumbe, on the contrary, alleges that "the more common forms seen in England are the results of disorders which

the habits of the individual have induced; that for one case in which a scrofulous diathesis is manifest, twenty others come under our notice where patients are accustomed to indulge in spirituous potations, and habitual violence to the digestive organs." The views of the French writers appear to me to be much more correct on this point. Dr. Parkes* says he "must dissent from Dr. Burgess's view of the essential local nature of the disease." But, I stated in my work on ERUPTIONS OF THE FACE, HEAD, AND HANDS, that I adhered to the view of the French dermatologists on this point, "who consider lupus to be a scrofulous disease in the great majority of cases" (page 87), although it is difficult to explain the success which attends an essentially local treatment of the malady. Indeed this is almost the only *methodus medendi* that succeeds at the Hospital of St. Louis.—B.]

Diagnosis.—As lupus may be confounded with several cutaneous affections of the face, it is necessary to point out the characters by which it may be distinguished from them. The circumscribed indurations of *acne rosacea* might be confounded with the tubercles of lupus, in its early stage; but in *acne* the indurations succeed to pustules, they are of a red colour, and are surrounded by an erythematous areola; while the tubercles of lupus are livid, indolent, and have been preceded merely by a livid tint of the skin.

Lupus with hypertrophy might, in some cases, be confounded with Greek elephantiasis, but the tawny tint of the skin, and the small irregular tubercles of elephantiasis, will serve to distinguish this latter disease. The same characters will assist us in cases where tubercular lepra has become ulcerated in different points, and presents here and there dark-looking scabs. These ulcers are more superficial than those of lupus, and have no tendency to attack the healthy points of the skin. Finally, Greek elephantiasis shows itself on several parts of the body at the same time, and then is attended by a variety of local and general symptoms, which are never seen in cases of lupus.

The superficial observer might mistake the incrustations of ulcerated lupus for the scabs of *impetigo;* but the latter are

* Treatise on Diseases of the Skin, by the late Dr. A. T. Thomson. Art. LUPUS.

yellow-coloured, prominent, rough, and seldom adherent; those of lupus are brown, thick, and very tenacious. Besides, the cicatrices accompanying lupus, and the ulcers which appear when the incrustations are removed, are decisive characters of that disease. There are, however, two affections which may be confounded with lupus; we allude to *noli me tangere*, and some forms of *syphilis*.

Under the former term have been confounded lupus and cancerous affections of the face, but they differ essentially from one another. Lupus seldom occurs in persons of advanced age, like *noli me tangere*; it commences with several tubercles, while, in cancer of the face, we have a single tubercle only; its tubercles are indolent, while those of cancer, surrounded by a hard circumscribed base, are accompanied by lancinating pains. Finally, *noli me tangere* is attended by inflammatory swelling of the soft parts, is exasperated by the use of caustics, and destroys the deep-seated parts of the face. Cancerous ulcers are painful and everted, and present a fungous appearance, without the dry thick scabs which are characteristic of lupus.

The diagnosis of lupus from certain forms of syphilis affecting the face, is sometimes a matter of much difficulty. When the diseases are confined to tubercles without ulceration, it is sometimes difficult to distinguish them. Syphilitic tubercles are rounded and larger; they are of a dusky copper-colour, and have much less tendency to ulcerate than those of lupus, which are softer, flatter, and generally covered by a thin layer of epidermis, partially detached; lastly, syphilitic tubercles of the face generally occur in adults, after the period of manhood, while lupus usually attacks young persons.

We must not lay much stress on the disease being seated on the cheeks or side of the nose, and conclude from this that it is lupus; for experience teaches us that the presence of a tubercle on the side of the nose is almost a pathognomonic sign of syphilis.

In its ulcerative stage, syphilitic tubercle also differs essentially from that of lupus; the syphilitic ulcer is deep, its edges swollen, of a dusky copper-colour, and sharply cut; the ulcer produced by lupus is of a dull red colour, and looks as if confined to the surface of the skin. The mode of destruction of parts will also serve to

distinguish the two diseases. In lupus, the skin is first attacked, and then the cartilages, and after a considerable time, the bones. In syphilis, on the contrary, the disease commonly commences with the bones, and when these have been struck with caries or necrosis, it extends to the skin. Finally, the tubercle of syphilis is almost constantly accompanied by constitutional symptoms, as pains in the bones, nodes, iritis, or ulcers in the throat, palate, &c.

Prognosis.—Lupus is always a formidable disease, not because it threatens life, but from its obstinacy and the destruction of parts by which it is often attended, and the numerous unseemly and indelible scars which are left, on healing. The prognosis is favourable in proportion as we are called to treat it in an early stage. It is more serious when accompanied by considerable tumefaction of the affected parts, and when the old cicatrices open afresh. As long as the cicatrices remain soft, and doughy to the touch, are of a bluish colour, and surrounded by tubercles, there is great danger of the recurrence of the disease. The full establisment of menstruation, at the period of puberty, is not attended with sufficient change to render the prognosis more favourable.

Treatment.—The constitutional treatment of lupus is simple enough; it consists in proper attention to the rules of hygiene, the use of baths, and bitters. These means are, generally, of little avail against so serious and obstinate a disease. When the patient, however, is of a scrofulous constitution, we must have recourse to appropriate treatment; some benefit may be obtained from the muriate of lime in solution (one drachm to the quart of water); a teaspoonful may be given every morning, and the dose increased by a spoonful, every four or five days, until the patient takes twelve spoonfuls a day. We may also try a course of chalybeates (the sulphate of iron, for example), and submit the patient to a generous diet and the action of pure invigorating air. In other cases we may employ the animal oil of Dippel, in doses of five or six drops, gradually increased to twenty-five; the decoction of Feltz, or the preparations of arsenic; but these means are of very doubtful utility, unless aided by local applications. Extremes of heat and cold must also be avoided, because they tend to make the cicatrices break out again; and in females, the menstrual function must be attended to. The local treatment consists, 1st, in the use of

irritants, for the purpose of modifying the vitality of the skin; and 2nd, of caustics, which we employ with a view of destroying the diseased surfaces, and arresting the progress of the malady and making healthy cicatrices.

Before ulceration has commenced in the tubercles, and in cases of lupus with hypertrophy, we should have recourse to such remedies as favour absorption. Ointments, containing the proto or biniodide of mercury, are the most powerful, and should be rubbed in over every point occupied by the tubercles. Biett has often employed the ointment of the iodide of sulphur with very great effect; we remember particularly two cases of lupus with hypertrophy, in which considerable benefit was obtained from frictions with this remedy. Some writers apprehend the development of erythema or erysipelas, under the influence of these frictions; but should any such complication occur, it is of no consequence, and might, on the contrary, be beneficial.

When the frictions now spoken of are attended with no benefit, and the tubercles begin to ulcerate, we must abandon our line of treatment, and have recourse at once to caustics.

These are of different kinds, and may be divided into solid, those in the form of powder, and liquid. Nitrate of silver is the principal one of the solid form, and this is of no avail in the treatment of lupus. Under the second head belong:—1. *Dupuytren's powder*, composed of calomel and arsenious acid, (one or two parts of the latter to one ounce of the former,) is an active, and at the same time safe caustic; it is suited to slight cases of the disease, occurring in children, females, or persons of irritable habit. The ulcerated surface being cleansed, a very thin layer of the powder is applied with a small puff. Although it seldom produces any pain or tumefaction of the surrounding parts, we must be careful not to apply it over too large a surface. A grey, very tenacious scab forms underneath, and often remains for a considerable time, unless removed by emollient applications.

2. The *arsenical paste* of Frère Côme is a much more powerful and valuable remedy, but its use requires caution. It is suited to old and obstinate cases of lupus, which have resisted milder means of treatment. It is applied in the following manner: a small portion of the paste, being prepared on a bit of slate or china, is then

spread with a spatula over the surface of the ulcer; but the extent of surface should never exceed that of a shilling. We have seen this remedy employed in a great number of cases at St. Louis, and never witnessed any dangerous constitutional symptoms produced by it. Sometimes, however, it excites certain local symptoms, that at first sight appear formidable, but these commonly yield to appropriate treatment. Thus, the application of the arsenical paste is constantly followed by erysipelas; this is sometimes slight, but occasionally very severe, and attended by enormous swelling of the face, and violent headache; these accidents, however, are dissipated in a few days by leeches, abstinence from food, laxatives, and foot-baths; the face assumes its natural appearance, and nothing remains except a dark, thick, and very adherent scab.

Under the head of liquid caustics belong—1. The *animal oil of Dippel*, which acts more as an irritant than as a caustic, and sometimes modifies in a peculiar manner the state of the parts to which it is applied. It is especially suited to causes where the nose is the seat of chronic, indolent tumefaction, with desquamation, and a purple colour of the integument. It may be applied with a small brush, which is passed repeatedly over the whole of the diseased surface. We have seen this mode of treatment employed by Biett with much benefit; but a complete cure was very rarely obtained.*

2. The butter of antimony, a remedy of but little use. 3. The nitrate of mercury is a very powerful caustic, and has been frequently employed with success by Biett. Like the arsenical paste, it excites erysipelatous inflammation, but in a minor degree. It may be applied over the ulcers, tubercles, and scars, which remain soft or purple, and seem on the point of breaking out afresh. A small brush, moistened with the acid, is passed over a surface of about a crown-piece in extent; some scraped lint is then placed over the cauterized surface, and moistened with the

[* I can recommend a strong solution of the bicyanuret of mercury as a very efficient local remedy. The solution should consist of:

℞ Bicyanuret of mercury, gr. iij. or iv.
Distilled water, ℥j.

The parts ought to be repeatedly touched with a camel-hair pencil dipped in the solution. I would also direct attention to the preparations of phosphorus described in the introduction and in the Formulary.—B.]

acid. The parts become immediately white, and a yellow scab gradually forms, to fall off in from eight to fifteen days. The application of the caustic is very painful, but this lasts for an instant only.

Caustics in the form of paste are now generally preferred, because they are more easily applied and managed. Among them the one most used is:—1. The chloride of zinc paste, a mixture of chloride of zinc and flour, in the proportion of one of the former to two of the latter. This should be applied, in a very thin layer, over a limited space. It causes considerable pain, which increases, and lasts for several hours. A thick, hard, greyish scab follows, surrounded by considerable swelling, which disappears in twenty-four hours; the scabs fall off at the end of two days, leaving a surface without ulceration. This paste is useful to destroy tubercles, the resolution of which it soon effects, when applied in very minute quantities.

[Mr. Ure recommends the employment of chloride of zinc as an efficient escharotic, in those so-called semi-malignant tubercles and ulcers which make their appearance about the face of persons advanced in life, where the skin is involved, but without any depth of new structure; and in a form of lupus, which he has described as the erosive ulcer of the follicles of the skin.* According to Mr. Ure, the depth to which this agent will corrode the morbid texture can always be estimated beforehand; its action is unfailing, and the eschar is separated in most cases from the eighth to the twelfth day, coming away in the form of a whitish-grey substance, and leaving behind a singularly healthy sore, which heals with great rapidity. In numerous instances where he has applied it very largely, he has never known it productive of constitutional disturbance. The pulse remains natural, and the skin cool.—B.]

2. *Vienna paste*, composed of caustic potash and quick lime, is a more energetic agent, and is suited to cases in which a rapid effect is desired over a surface of limited extent. A layer of the paste is applied to the part left uncovered, by making a small hole in a piece of adhesive plaster placed over the affected surface. This paste is

* Vide *London Medical Gazette*, vol. xix., p. 328.

allowed to remain ten minutes, at the end of which time it is removed, and the surface cleansed. It causes considerable pain, and is followed by a scab which is thicker than that caused by the chloride of zinc.

3. *Arsenical paste*, composed of ten parts of white arsenic, twenty parts of sulphuret of mercury, and fifty parts of animal charcoal. This preparation, now perhaps too little used, excites the part to which it is applied, and produces active caustic effects. Its application is followed by symptoms which seem severe, but which rapidly disappear. A solid cicatrix is produced, which circumstance renders it very valuable in old and obstinate cases of lupus, especially those which destroy deep-seated parts.

Whatever the form of caustic used, it should be applied only over surfaces of limited extent, on account of the accidents which it might occasion, and its activity should always be in proportion to the effect desired, lest you add to the destructive power of the disease itself.

Antiphlogistic measures must be employed to relieve the irritation which may follow their use, and care is necessary not to interfere with the process of cicatrization by too early a removal of the scabs. In the majority of cases, however, a single cauterization is not sufficient to arrest the disease; we are compelled to repeat it over and over again, perhaps for years. When the disease is extensive, the greatest perseverance is required on the part of the patient and his medical attendant. We saw a young girl in the wards of Biett, the whole of whose face had been successively attacked by lupus; but she was cured after a lapse of several years, and the use of more than fifty cauterizations.

During the treatment of lupus, the physician must not neglect certain precautions which are essentially connected with the future well-being of his patient. Thus he must be very careful to prevent occlusion of the nostrils, during contraction of the scars, by introducing daily a piece of prepared sponge; this must be done for a considerable time, because the tendency to obliteration of the nares exists not only during the ulcerative stage, but long after the formation of the cicatrices.

Lastly, the local and general treatment of lupus may sometimes be aided, with marked benefit, by the use of common or vapour baths,

and particularly the vapour douche, which are well suited for lupus with hypertrophy.

[Cod liver oil and the preparations of iron will be found valuable auxiliaries in the treatment of cases of a decidedly scrofulous nature. Donovan's solution of arsenic, iodine, and mercury is an excellent remedy in the treatment of lupus. One drachm measure of the liquor of hydriodate of arsenic and mercury, consists of water one drachm, arsenious acid one-eighth of a grain, peroxide of mercury a quarter of a grain, and iodine in the state of hydriodic acid, about three-quarters of a grain. The dose to begin with for adults is fifteen drops, which may be increased gradually to forty drops. Some practitioners are, however, of opinion, that all the curative effects of the medicine will be secured by doses not exceeding twenty minims. This preparation has also been used externally in the form of lotion with benefit. I have found the solution of arsenic, iodine, and mercury a most valuable therapeutic agent in the treatment not only of lupus, but of a variety of other cutaneous diseases. This remedy, together with the preparations of phosphorus, the bicyanuret of mercury, and the arsenical paste of "Côme," will be found efficacious agents in the treatment of lupus. M. Cazenave has recently employed with benefit a mixture of :

℞ Biniodide of mercury, gr. xv. to xl.
Olive oil and cerate, ℥j.

To be applied to the affected parts every day or two. It often causes the resolution of even large tubercles.—B.]

PELLAGRA.

SYN.—*Pellagra; Pellarina; Scorbuto Alpino; Dermatagra;* Scorbutic Paralysis; Endemic or Pellagrous Erythema; *Elephantiasis Italica;* Italian Leprosy.*

By the word *pellagra*, (from *pellis agra*, unhealthy skin,) is intended a peculiar diathesis, very common in Lombardy, characterized pathologically by various functional disturbances of the digestive organs and of the nervous system, by a desquamation, of different shades of chocolate colour, of the epidermis of parts exposed to the sun in the spring, a desquamation usually preceded by an erythema, which is more or less marked, but always ephemeral, and which ceases when the parts are withdrawn from exposure. These characteristic marks of pellagra vary very much, not only in intensity, but also in manner of appearance, being sometimes isolated, and at other times together; showing themselves in some cases first on the skin, and in other cases first affecting the digestive organs, or the nervous system.

The opinion that pellagra always produces physical deterioration is not true; those with this diathesis from infancy usually present as healthy an aspect as any others, and sometimes retain their flesh and colour to the last stage of the disease. Sometimes some members of a family are attacked, while other members of the same family escape, without any apparent cause for this exemption.

In our description of pellagra, we differ from the plan adopted by most of the authors who have written on it, of describing it according to periods or degrees, and much less according to years. The division into *commencing*, *confirmed*, and *inveterate*, is not a practical one; for pellagra may be beyond hope from its commencement. The expressions *period* or *degree*, which convey the idea of certain fixed symptoms and appearances, are not adapted to the description

[* This article is new, and was written by M. Shedel, at Milan, in 1846, during the time I was also studying the disease at the Great Hospital in that city. The result of my observations is published in my work on the "Climate of Italy." It coincides in most respects with M. Shedel's statement.—B.]

of a disease so capricious as pellagra. The term *degree* seems to indicate an increasing intensity; while the second or third time of appearance of the disease may be less severe than the first. When we employ these terms, therefore, we shall use them only as synonyms of a more or less advanced stage of the disease; for, like every other disease, pellagra has a beginning, a progress, and a termination. The only natural division is according to its progress, and this may be either *intermittent*, *remittent*, or *continued*. It is *intermittent* when the different symptoms appear in the spring, then disappear, leaving the person in perfect health during the remainder of the year, to reappear with greater or less intensity the succeeding year; *remittent*, when appearing in the spring with an increase of one or more symptoms, the disease decreases in severity, but does not disappear entirely; and *continued*, when it persists during the whole year with very little change in its character. The progress of pellagra is then essentially irregular, for while it sometimes destroys life in a short time, it is often so mild in its nature that the subject of it may for a long period suppose himself in good health. In other cases, after affecting a person seriously for some years, its progress is suspended for some time, and it then rapidly proves fatal.

The commencement of pellagra is marked by the appearance of either a single one of the characteristic symptoms of which we have spoken, or several of them at the same time. We will briefly review the different symptoms: 1. The cutaneous affection; 2. The symptoms connected with the digestive organs; 3. Those connected with the cerebro-spinal system.

1. *The Cutaneous Affection in Pellagra.*—This always appears on parts most habitually exposed to the sun's rays, as the backs of the hands and the external part of the forearm, sometimes as far up as the elbow, the dorsum of the feet, and the inferior and anterior part of the legs, the superior and anterior portion of the thorax, and sometimes the forehead and sides of the face. The first thing noticed on these points is most commonly simple desquamation of the epidermis, which grows dark, and assumes a more or less deep chocolate colour, dries up, and is detached without either inflammation or redness. It is a sort of pityriasis, without any decided itching and without any pain, a morbid change reaching to the

vessels which secrete the colouring matter, and effecting a change in it. In other cases, on the contrary, there is a more or less marked erythema, especially when the rays of the sun have been bright, or the patient has been long exposed to them; the inflammation may even be almost erysipelatous, with the formation of bullæ. In these cases there is a severe burning sensation accompanying the inflammation, which gradually goes off when the exposure to the sun ceases. But this is succeeded by the blackish desquamation of the epidermis, which gives to pellagra its characteristic physiognomy.

In the earlier periods of the disease, the erythema, even when well marked, disappears entirely; the darkened epidermis is detached, and the skin resumes its usual colour. But this is not the case when the desquamation has been of long standing. The skin then looks thin and has a shining surface, and resembles the cicatrix of a very superficial burn; patches are often seen on its surface of a more or less brown colour, but it is all soft to the touch. Other cutaneous affections, as impetigo, scabies, &c., may complicate pellagra.

The desquamation in pellagra appears more particularly in the spring, but very often bears no direct ratio to the duration of exposure to the sun; and different individuals are very differently affected in this respect. Nor do differences in the extent or severity of the desquamation bear any relation to the internal symptoms, but it appears to be in some respects independent of these symptoms. The desquamation, and still more the erythema in pellagra, does not appear unless the person is exposed to bright light and to the sun's rays.

2. *Symptoms on the part of the Digestive Organs.*—According to Strambio, functional derangement of these organs is one of the most constant precursory symptoms of pellagra; it is also the most frequent symptom during the progress of the disease. Still it does not always take place, and some patients with pellagra reach the last stage of the disease without any trouble of this kind.

Inordinate appetite and diarrhœa are the most frequent symptoms of gastro-intestinal disorder; dysentery is rare. The boulimia is accompanied by neither cardialgia nor fainting; the functions of the stomach are rarely deranged, the principal trouble being in the intestines. The food is rapidly digested and soon passed by stool,

followed by an immediate return of a great desire for more. The diarrhœa is often very obstinate, and may itself alone cause death. Still, in some cases, constipation equally obstinate continues to the close of life, and in other cases these two conditions alternate. There is sometimes emaciation, and at other times the natural flesh is retained to the last.

The alvine evacuations, which are always very watery, and usually yellow or greenish, are sometimes greyish and even black, and are occasionally mixed with blood.

The mucous membrane covering the cheeks, the tongue, and throat, is occasionally sprinkled over with ulcers; and dryness and cracking of the lips, with lividity, have been mentioned as a characteristic symptom of the pellagrous diathesis. Other symptoms have also been mentioned, as a very salt taste in the mouth,* especially in the morning, free expectoration, and even profuse salivation.

3. *The Nervous Symptoms* do not usually occur as precursory symptoms of pellagra, but are very marked during the progress of the disease. Occasionally, however, they precede all the other symptoms except the desquamation.

Great depression of spirits, without cause at all sufficient to produce it, exaggerated fears, vertigo, disturbed vision, ringing in the ears, buzzing in the head, sharp shooting pains along the limbs, burning of the feet, very painful cramps in the limbs, tetanic contractions, involuntary movements, hasty walking forwards, weakness of the lower limbs, paraplegia, propensity to suicide, especially by means of drowning, a peculiar expression of countenance of a fierce character, sometimes convulsions, and paroxysms of epilepsy, come under this head. The most constant among these symptoms are vertigo, wandering pains, burning of the feet, cramps, tetanic contraction of the muscles, delirium, and passion for drowning.

In addition to these symptoms, chronic pulmonary affections almost constantly exist in confirmed cases of pellagra, and contribute to the fatal result.

Lesions after Death.—When death is caused by any intermittent disease, no special lesion is usually found which can be referred to

[* The saliva and sweat are so impregnated with saline matter, that in some districts the disease derives its name from that circumstance, and is called "*salsedina.*"—B.]

the pellagrous affection. In chronic cases, on the other hand, and when there are symptoms of marked lesion of any part, whether of the nervous, or respiratory, or digestive system, changes are always found corresponding with the symptoms observed during life, the most frequent of which are those of the digestive organs.

Predisposing Causes.—Pellagra occurs at the earliest age, and is even sometimes congenital. In three hundred and fifty-two cases, Calderini found eighty-three in which the disease appeared before three years of age, and one hundred and twenty, from twenty to twenty-five years. It is often, but not necessarily, hereditary, and is not contagious, and is but very rarely communicated by a nurse to a sucking child. It is met with more especially in the northern part of Italy and in agricultural districts. All causes which have a tendency to depress the nervous system and derange the digestive organs, may predispose to pellagra.

Exciting Causes.—These have been referred to five distinct heads: 1. insolation; 2. the habitual use of indigestible food; 3. the exclusive use of diet not sufficiently nitrogenized; 4. the habitual use of Indian corn; 5. some peculiar and endemic effect of the soil.

Diagnosis.—No precise diagnosis of pellagra can be made when the cutaneous affection is absent. This affection is well characterized by its cause, the appearance which it presents, its progress, and the marks which it leaves on the skin. It consists of: 1. an irritation of the skin; 2. epidermic desquamation; 3. persistent marks. Of these three changes, the first two are ephemeral.

Nature of the Disease.—Pellagra, whether endemic, epidemic, or sporadic, is a peculiar diathesis, *sui generis*, and which most frequently denotes a cachectic state of the system.

Prognosis.—Confirmed pellagra seems to be incurable; but even in this case the prognosis would be less unfavourable if the patient would persevere in the use of means which have produced favourable results, and would change his location and habits of life. After it has reached a certain point, it is beyond the reach of art.

Treatment.—Simple change of nourishment often produces the best results; but wine and animal food do not seem to be indispensable, since individuals with symptoms of pellagra have improved very much in prison when confined to bread and water. But active measures are sometimes required to meet the severe

symptoms of the disease, either of a nervous or a congestive character, or both together—as local and general blood-letting, anti-spasmodics, and opiates. But in the use of these means, the nature of the disease must be kept in view. For the cutaneous affection, simple tepid baths and emollient fomentations are all that is required.

ALEPPO EVIL.

SYN.—*Malum Alepporum; Bouton d'Alep.*

Under this name is comprised a tuberculous disease of the skin, almost unknown in France, but which prevails endemically at Bagdad, in several towns on the banks of the Tigris and Euphrates, and particularly at Aleppo, whence it derives its name.

We had but a very imperfect idea of this affection from the descriptions of M. Bo and Mr. J. Russel, until two French physicians, MM. Guilhou and Lagasquie, studied it with great care during their travels in Syria in 1835. The thesis of M. Guilhou contains the most complete and correct history of this disease that we possess.

The Aleppo evil consists in the eruption of one or more tubercles, varying in size, but regular in their progress and duration; it occurs only once during life, and is followed by a more or less disagreeable and indelible cicatrix.

There are two species of this complaint; in one the tubercle is single and denominated *male;* in the other, the buttons are called *female*, several principal tubercles being surrounded by a number of smaller ones. MM. Guilhou and Lagasquie saw a case in which were seventy-seven principal buttons, surrounded by so great a number of smaller tubercles as to give the disease the appearance of confluent small-pox.

The Aleppo evil may attack any part of the body, but it chiefly occupies the face. This is its favourite seat in the inhabitants of Aleppo; while in strangers, it more frequently appears on other parts. Traces of it have been seen on the genital organs. It usually lasts for a year, but it may continue longer, and has existed from infancy to puberty. We may distinguish three periods of this disease, viz., that of *eruption*, of *suppuration*, and of *desiccation.*

In the first or eruptive stage, the point of the skin where the evil is about to appear presents a slight lenticular eminence, and this gradually increases during four or five months; there are no local or general symptoms at this time. As the second stage sets in, the tubercle or tubercles become the seat of acute pain, especially in parts but slightly covered with flesh, and about the joints; ulceration now occurs, and the ulcer is covered by a moist, whitish scab, which separates in part or in whole, and leaves underneath a number of suppurating fissures, from which there is a discharge of pus which is often inodorous, clear, and of a slightly yellowish colour. The ulcer is superficial and irregular; its surface red and covered with vegetations; its diameter from half an inch to three or four inches. The scab now falls off and is reproduced, or it adheres from the commencement of the ulceration, and a thick, ill-conditioned matter is discharged from underneath it. This period may continue for five or six months, and it terminates in the formation of a dry, tenacious scab; this is the third stage or period of desiccation, which commonly lasts for the rest of the year.

The Aleppo evil occupies the whole thickness of the skin, and consequently leaves an indelible cicatrix behind it, which is usually superficial, but sometimes deep. The latter is generally white; sometimes it is brown and wrinkled; sometimes of a very ugly appearance, distorting the eyelids, nose, &c. The disease occurs in persons of the best constitution, and is rarely complicated with scrofula; but should the latter be the case, it may last for years. It attacks persons of all ages, sexes, and conditions of life; it is found amongst all professions. Children are attacked about the age of two or three; and at Aleppo, where M. Guilhou observed the disease, not a single child reached the age of ten years without having had it, and scarcely a single adult had escaped the malady. It is not contagious, and attacks strangers as well as natives. It is endemic, not only in Aleppo and its neighbourhood, but also at Bagdad and many other cities, and especially in the towns between the two cities. There is no fixed time for the appearance of the disease in strangers; some are attacked after six months, others not until fifteen or eighteen years have passed over. In many cases a short sojourn in the country has been sufficient to develop the germ of the malady, which breaks out at a long subsequent period, and in

some distant country. M. Guilhou mentions two curious facts in connexion with this point. An English traveller, who merely passed through Aleppo, was attacked in London several years afterwards. A French merchant, who had escaped the disease during a residence of twenty years at Aleppo, was seized by it at Marseilles, long after his return from Syria. Facts of this kind are, besides, extremely frequent. The proximate cause of Aleppo evil is quite unknown to us. It has been long attributed, in Aleppo, to the use of water from a particular stream, of which the inhabitants drink; but although this opinion has been strengthened by the minute researches of MM. Guilhou and Lagasquie, it is difficult to adopt it without reserve.

Dogs are subject to the Aleppo evil, which attacks them exactly in the same manner as it does the human subject; but no other domestic animal seems to be liable to it.

This is not a formidable disease; its greatest inconvenience being the inevitable occurrence of a scar, which may be very unsightly. According to M. Guilhou, the mode of treatment consists in emollient applications, simple lotions, and the preserving the evil from contact with the air. The remedies generally employed seem to have had no effect whatever in arresting the progress of the tubercles. M. Salina, of Aleppo, however, assures us, that he invariably succeeded in reducing the extent and duration of the eruption, by using the actual cautery previous to the period of suppuration. He likewise recommends the use of an ointment composed of camphor, vinegar, and litharge, or of cassia-pulp moistened with rose-water.

Although the disease is never fatal, the ulcers often partially destroy the eyelids and the alæ of the nose; they divide the lips, cause gaps in the external ears, and always leave frightful cicatrices behind them.

SYPHILITIC ERUPTIONS.

SYN.—*Syphilida; Syphilides.*

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1. PRIMARY SYPHILIS.

M. CAZENAVE announces the following propositions (in his *Traité des Syphilides*) which he considers are supported by the past history of syphilis, and by the observations of himself and others: 1. There is a syphilitic disease. 2. It has existed from the remotest antiquity. 3. It is the result of a special poison which infects the system; there is but one virus. 4. Syphilis is contagious. 5. It is hereditary. 6. It is announced by various primary symptoms; it occasions secondary symptoms. 7. Mercury is still the best remedy that can be employed in the treatment of that disease.

He considers that syphilis is not a disease of modern origin, and essays to prove that proposition from the works of the earliest writers—from the Leviticus of Moses down to the writers at the close of the fifteenth century, the period which has generally got the credit of being distinguished by the birth of the *morbus Gallicus*.

Under the generic name of gonorrhœa, says M. Cazenave, the ancients have confounded all manner of venereal infection, and hence has arisen the idea that the syphilitic disease, according to the general acceptation of that term, was altogether unknown to them. Hippocrates, in describing the *morbus femineus* of the Scythians, mentions the occurrence of ulcers of the pudenda. Celsus recommends (*De Medicina*, l. vi, cap. 18) the operation of phymosis in a case of a rebellious chancre on the corona. Galen describes buboes and ulcerations resulting from disease of the genital organs. Oribasius, Ætius, Paulus Ægineta, and several other writers of the

same period, describe the disease more distinctly; but the question of antiquity is not solely dependent on medical authority for support. It is further corroborated by historical writers, as for example by Pliny and Josephus. The former relates the case of a woman who was drowned in the lake of Como, because her husband was attacked in his private parts with an incurable disease (*maritus ex diutino morbo circà velanda corporis ulceribus putrescebat*), and Josephus, in describing the death of Herod, states that the genitals were in a state of putrefaction, (*ipsa quoque verenda putrefacta scatebant.*) With regard to the secondary symptoms, or syphilitic eruptions, M. Cazenave considers that they were confounded with lepra, elephantiasis, mentagra, lichen, &c., a mistake which, by the by, is by no means uncommon even at the present day.*

M. Cazenave is decidedly opposed to the doctrine of a double virus as regards the venereal diseases, or, in other words, he holds the opinion that chancre and gonorrhœa are results of the same specific poison.

"Being placed under favourable circumstances," says the author, "for observing the development of the secondary symptoms of syphilis, I am in a position to state that in a great number of cases, the general infection of the system has originated in a gonorrhœa (blennorrhœa); and if my opinion, with the proofs which I shall adduce by and by, shall be deemed insufficient for establishing this fact, I may invoke the testimony of M. Baumés, who asserts that syphilitic diseases of the skin are very frequently the result of a blennorrhagic discharge, and altogether independent of syphilis. I hope to be able to show that blennorrhagia, like chancre, may produce that morbid condition called constitutional syphilis."

M. Cazenave differs in many points with M. Ricord as regards the theory of syphilis, as the reader may judge from the following summary given to me by Mr. Acton:—

1. Gonorrhœa and syphilis, according to M. Ricord, differ in many

[* M. Heusinger states, in his remarkable work, *Recherches de Pathologie Comparée*, "that most of our domestic animals are subject to contagious discharges and ulceration of the generative organs; they are transmissible by coitus, and exhibit a resemblance to syphilitic diseases. In the opinion of M. Heusinger, they are nearly in the same condition as the syphilitic affections of man were before the close of the fifteenth century."—B.]

particulars. The former never gives rise to secondary symptoms; the exceptional cases occasionally met with depend upon the discharge from the urethra, arising from chancres existing within the meatus, giving rise to the supposition that the patient suffers from gonorrhœa. He further believes that other exceptional cases depend upon practitioners calling the exanthematous eruption following the employment of copaiba, syphilitic instances of which we have occasionally witnessed.

2. Another difference between Ricord and Cazenave consists in the denial by the former that secondary symptoms are inoculable. No doubt cases occur, from time to time, which throw doubt on the correctness of our opinions, but, as in the case of condylomata, we show that in some cases a chancre may be changed *in situ* into condylomata, and in such case the part so changed may partake somewhat of chancre, and furnish inoculable matter; but we deny that condylomata which occur, as they occasionally do, in the armpit or navel, will, under any circumstances, produce secondary symptoms when inoculated; although the secretion taken from so called condylomata on the labia of women of the town, will occasionally do so from the causes mentioned above, yet in many of these cases, all attempts at inoculation will fail.

3. Ricord lays it down as an axiom that secondary symptoms almost certainly follow one form of chancre—namely, the indurated sore—and that although other forms of ulcer may give rise to severe local affections, they will not, with but few exceptions, be followed by secondary symptoms.

4. Cazenave and his school deny that it is of use to cauterise chancres. Ricord, on the contrary, thinks that in the early stages escharotics can effectually destroy the poison which acts in the first stages but locally, not first infecting the system; and we further say that in the non-indurated form the system is not affected, and that by destroying the virus *in situ*, we run the best chance of protecting the system, if the case is seen sufficiently early. Cazenave, on the contrary, maintains that syphilis is always a constitutional disease.

Although such conflicting opinions exist on these and various other points as to the theory of syphilis, still it is satisfactory to know that little difference exists in the treatment recommended, namely, mercury in the secondary, and iodide of potash in the

tertiary forms. The modern school, however, never give mercury in the primary symptoms unless induration exists; experience having proved that a judicious practitioner can produce a perfect cure without administering the mineral.—B.]

2. SYPHILITICE RUPTIONS.

The venereal disease appears to have first shown itself in Europe under the form of cutaneous eruptions. The earliest writers on syphilis confine their descriptions of that complaint to a pustular affection of the skin, and from their use of the terms moist, ulcerated, crustaceous pustules, they seem to have been acquainted with the several forms of the malady.

For several centuries the syphilitic diseases of the skin attracted little attention, and were but very briefly noticed by writers. In the early part of the nineteenth century, however, they were arranged under a separate class, denominated syphilides, a name given to every species of cutaneous affection consequent on the venereal disease. The species were arranged according to their different conditions or accidental appearances, without any reference to the elementary form of the disease. Hence, distinct varieties were confounded together, and species established on characters that were altogether secondary and insignificant. Biett paid considerable attention to this class of cutaneous affections, and studied their progress and development with great care. He endeavoured, above all, to trace their elementary characters; and thus succeeded in distinguishing several varieties upon unobjectionable grounds. We shall take the results of Biett's researches as the groundwork of our descriptions.

We confine the term syphilitic eruptions to cutaneous diseases of venereal origin, actually seated in the skin, and similar, in their elementary characters, to other well-known diseases of the integumentary system. We thus reject a number of local symptoms which do not belong to cutaneous affections, properly so called, together with every species of ulcer not preceded by a scab or tubercle. Thus the true venereal chancre, which is not preceded by any elevation of the epidermis, condylomata, warts, &c., form

essential lesions of a peculiar kind, and should not be arranged amongst the syphilitic eruptions.

Syphilitic cutaneous eruptions may be divided into exanthematous, vesicular, pustular, tubercular, papular, and scaly. The eruption may be primary, that is to say, occurring soon after infection, and in most cases attended by other symptoms; or it is secondary, coming on at an uncertain period, after the disappearance of the primary symptoms of the disease. It is generally a chronic affection; but primary syphilitic eruption, especially the exanthematous form, may be acute. Persons of all ages, from the infant to the old man, are liable to it.

The symptoms of syphilitic eruptions may be arranged under three heads. First, we have those common to syphilitic eruptions in general; second, those peculiar to each class; and, third, the constitutional symptoms by which they are so constantly accompanied.

1. *Symptoms in common.*—Syphilitic eruptions are commonly of a copper colour, though in acute cases the tinge is lighter; it never, however, assumes the true inflammatory redness. Their form is almost always circular. This is manifest in the smaller spots: and, in the larger ones, the tendency to a circle may be traced over the greater part of the ring. The scales are always thin, dry, and of a grey colour; the scabs thick, dry, fissured, and of a dark or greenish tint. The eruption may occur on any part of the body, but the parts most frequently attacked are the face, forehead, nose, back, and shoulders. According to Biett, it rarely occurs on the hands or wrists. The skin, in the intervals between the affected parts, is often of a brownish tint, and the patient exhales a peculiar and extremely offensive odour. Cold favours their development, while heat has the contrary effect. The scars left by syphilitic eruptions present also a peculiar and characteristic aspect; they are round, depressed, of a dull white colour, and sometimes marked by deep furrows. To complete the list of the symptoms common to syphilitic eruptions, we must add absence of heat and of itching.

2. *Particular symptoms.*—We have already enumerated the elementary forms of syphilitic eruptions, and shall now enter on a particular consideration of each.

Exanthematous syphilitic eruption.—This species presents two varieties :

The first (*syphilitic roseola*) appears under the form of small, greyish, irregular-shaped spots, of a *coppery* red colour, slightly confluent, and which disappear, although slowly, under pressure of the finger. It occupies chiefly the trunk and limbs, and often accompanies primary symptoms, especially gonorrhœa. It is frequently preceded by malaise, and soreness and wandering pains in the limbs ; occasionally, although rarely, by slight febrile disturbance, and extends somewhat rapidly, so that it is sometimes general at the end of twenty-four hours. It may remain stationary for several days, and even for weeks ; in this case, the redness fades, and changes into a greyish colour, which continues for a still longer period, and is rendered more distinct by any cause which quickens the capillary circulation. Syphilitic roseola is accompanied by a peculiar form of angina, characterized by a violet red colour of the mucous membrane of the mouth, the velum, and pharynx, and by marked dryness of these parts. This is often a very important diagnostic symptom. These are the characteristics of primary and sub-acute roseola ; it is sometimes consecutive, and in these cases assumes a chronic form.

The second variety (*erythema papulatum*) constitutes that peculiar form of eruption which, as it almost always accompanies gonorrhœa, has been erroneously attributed to the use of balsam copaiba, and regarded as the effect of that article. But it appears when that disease has been treated by other remedies, and never occurs when that article is given for other complaints.

Syphilitic erythema papulatum, is characterised by spots of moderate size, slightly elevated above the surface, of a dull red, or rather of a brownish-grey colour, which only partially disappears under pressure of the finger. It is almost always primary.

Vesicular syphilitic eruption.—This variety was for a long time considered as one of the most rare forms which syphilis could assume. Biett met with it only a few times ; but we have seen it repeatedly, and believe that, if not very common, it occurs more frequently than is generally supposed.

Vesicular syphilitic eruption may present two forms : the first, *that in the form of varicella*, is fully described in the following

history of a case which we had occasion to observe in the wards of Biett :—A young girl, sixteen years of age, of healthy constitution, had complained for a few days of some sense of heat in the throat, with difficulty in swallowing, anorexia, and irregular fever; a number of small eminences now appeared on different parts of the body, and she entered the Hospital of St. Louis. The eruption was at once seen to be vesicular, and pronounced chicken pock. It was the sixth day of the eruption; it covered nearly the whole body, and the vesicles were in different stages; some being nascent, others dried up. Biett, having examined the patient, discovered a strong resemblance between this eruption and two other cases of syphilitic vesicular eruption which he had occasion to observe before. This diagnosis was soon confirmed by the progress of the disease. The vesicles were small, resting on a broad base, and surrounded by an areola of vivid copper colour; their progress was slow, and they were unattended by any local symptoms. They gradually faded away, and the fluid was absorbed; but in some the contents of the vesicle hardened into a thin scab, which adhered for some time. Every one of them, however, left behind a coppery injection of the skin, which presented all the characters of a syphilitic blotch. In addition to these circumstances, and confirmatory of Biett's diagnosis, a careful inspection of the throat disclosed a round, greyish ulcer, with sharp-cut edges, &c. The treatment employed was insignificant, as Biett desired to see if any more decisive symptoms would manifest themselves; but the patient left the hospital in a fortnight. After the expiration of a month she was visited at home, when her whole body was found covered with true syphilitic pustules.

The second form of vesicular syphilitic eruption is *syphilitic eczema*, characterized by groups of vesicles, scattered over different parts, and resting upon patches of a coppery red colour. The vesicles are usually of large size and more elevated than those of eczema simplex; the progress of each individual vesicle is also slower; absorption is more tardy; and the disease terminates with slight exfoliation, which forms on the affected parts numerous borders, the more striking in their appearance from contrast with the points which were the seats of the vesicles.

Syphilitic eczema may also assume the form of eczema impetigi-

nodes. The patches are then covered with small, black, furrowed scabs, which are more adherent than in the simple form of this disease, and which are followed by characteristic ulcerations.

Vesicular syphilitic eruption is preceded by some constitutional disturbance, and is most frequently a secondary symptom.

Bullar syphilitic eruption.—This may appear under the two forms of pemphigus and rupia.

Syphilitic pemphigus is an affection which seems peculiar to new-born infants. Dr. Krauss published, in 1834, an interesting thesis on this affection, although it evidently embraces facts which do not belong to pemphigus. M. Paul Dubois has since observed many cases of this kind, and was the first to establish the syphilitic nature of the disease. In all the cases which he has collected, he has established the previous existence of syphilis in the mother, and has seen characteristic ulcers under the bullæ. The disease is marked by the presence of several bullæ, varying in size, rarely exceeding that of a filbert, and most frequently seated on the palms of the hands and soles of the feet, surrounded by a violet-coloured areola, and filled with a sero-purulent fluid. It is primary, and always fatal.

Syphilitic rupia is much more rare. It is characterized by large irregular bullæ, distended by a blackish liquid, followed by dark conical scabs, which cover deep and characteristic ulcers. This form is essentially secondary.

Pustular syphilitic eruption.—This form is characterized by the presence of small elevations containing an ichorous or purulent matter. They are succeeded by greyish blotches, ulcers, or cicatrices. The history of this form of syphilitic eruption derives interest from the fact that almost all writers on this subject have described and confounded all venereal affections of the skin under the vague term of *pustules*, at the same time that the precise definition of this form of syphilitic disease is not even now very well understood by practitioners.

1. In one form, the pustules (*psydraceous*) are either small and narrow, or of a large size, elevated, and round. They have a hard base, and are surrounded by a copper-coloured areola. The pustules themselves are of a dull reddish hue, and are developed in successive crops, presenting examples of the disease in its origin,

maturity, and decline. Their progress is slow, and the inflammation attending them moderate; in some cases, however, it destroys the true skin, and leaves behind it a small, white, circular scar, depressed in the centre, and not larger than a pin's head. These scars, which have been erroneously supposed to follow papules, because the affection has been confounded with a papular eruption, are in a great majority of cases the sequels of true pustules. This form chiefly occurs on the face and forehead, where it bears some resemblance to acne rosacea; but it may appear on every part of the surface. The pustules dry off, and form a small greyish scab, which separates, and may leave behind it either a cicatrix or some injection of the skin. The psydraceous pustules rarely terminate in ulceration, and then only when several of them have become confluent.

When seated on the limbs, these pustules present a different appearance. They are sometimes of the size of a lentil, quite numerous, and but slightly elevated above the surface, and with a hard base, and contain but a very small quantity of yellowish white matter, which presents a strong contrast to the copper-coloured elevation on which it rests. They are not followed by ulcers; a thin scab forms on them, which is followed by a scar, or sometimes by a livid discoloration, or a small chronic induration.

This form of syphilitic eruption (called also *lenticular pustular eruption*) is the most common of all those which assume the pustular character, and is the one most frequently mistaken for the papular form, doubtless in consequence of the rapidity with which it passes into the purulent stages, and the persistence of the induration which so early follows, and also on account of the peculiar arrangement of the eruption, which is always spread over a large surface in isolated elevations. This explains why the papular form of syphilitic eruption has been erroneously regarded as the one of most frequent occurrence.

2. *Syphilitic impetigo.*—This form is usually preceded by slight malaise, and commences with redness of the affected points; this is followed by small collections of purulent matter, forming irregularly shaped patches, more or less confluent, resting upon surfaces of a coppery red colour, which are soon covered by scabs irregular in shape, harder, darker coloured, and more adherent than those of

common impetigo. Beneath these scabs are characteristic ulcerations, which are followed by scars, varying in extent and shape. This is the form called *pustulo-crustaceous* syphilitic eruption. It may affect any part of the surface, but more frequently attacks the face. It sometimes appears on several places at the same time, but has no tendency to spread to neighbouring parts. It is always secondary.

3. In the third variety of syphilitic pustular eruption, the pustules are still larger (*ecthyma syphiliticum*), and resemble those of ecthyma. They are few in number, isolated, and chiefly occur on the limbs, and especially the legs. They appear at first under the form of a large livid spot, about the size of a shilling, or larger. The epidermis is now raised over a considerable portion of the spot, by a greyish, sero-purulent matter; the elevation increases slowly, and is always surrounded by a broad, copper-coloured areola, quite different from that of ordinary ecthyma, which is of a violet red. After a few days, the pustule breaks, and the contained matter concretes into a dark, hard scab, which gradually becomes thicker, and fissured at the edges, being of a circular shape. All this occurs without any local inflammation: there is little heat, and no pain; the scabs are extremely tenacious, and may remain for an indefinite time without separating. When they do come away, we find underneath them deep round ulcers, with sharp-cut hard edges, of a purple colour, whilst the bottom is greyish and ill-looking. They have little tendency to spread; the scabs now gradually form again, and are frequently renewed, until, under the use of appropriate means, they become thinner, while the ulcers get clean and heal, leaving behind them circular and lasting cicatrices.

This is the most common form of the syphilitic pustular eruption, and the one which usually occurs in new-born children. Here the pustules are broad, superficial, flat, of an oval shape, and in great numbers; the scabs are dark and thick, and conceal small ulcers underneath. The countenance of the patient presents, at the same time, a peculiar appearance, which it is difficult to describe: the skin is of an earthy hue; the child is emaciated, the face is drawn in and marked, like that of an old person, by numerous wrinkles, while the whole body exhales a most disagreeable odour.

In some cases the skin, near the roots of the nails or underneath them, is the seat of syphilitic pustules, which ulcerate, discharge a sanious matter, and finally destroy the nail. The latter may grow again, but its appearance is spoiled. The ulcers heal, but the skin remains red, bleeds on the least touch, and is sometimes the seat of excessive pain. Pustular syphilis is most generally consecutive.

Tubercular syphilitic eruption.—This is one of the most frequent forms under which the venereal disease attacks the skin. It commences with tubercles of different sizes, and of oblong, flattened, or conical shape; they are of a red or copper colour, sometimes isolated, but generally agglomerated into patches of a circular form. They may remain indolent for an indefinite time, and are smooth or shining, or covered with a slight epidermic exfoliation. In other cases the tubercles ulcerate, and the ulcers, which are covered by thick scabs, may destroy deeply the subjacent tissues, or spread more or less superficially along the skin.

Tubercular syphilis may occur on any part of the body, but chiefly attacks the face; and the cartilages of the nose or angles of the mouth are so frequently its seat, that a tubercle on these parts may almost be considered as pathognomonic of venereal infection. It likewise appears on the eyebrow or scalp, destroying the roots of the hair. We saw a patient in Biett's wards, the whole of whose body was covered by venereal tubercles. The following are the principal varieties of this form of syphilitic eruption:—

1. *Tubercular syphilitic eruption in groups.*—In some cases the tubercles are small, not larger than a pin's head or a pea, rounded, and of a copper colour; they are collected together into circles of various sizes. Each tubercle is surmounted by a small disc of exfoliated epidermis, which is hard and greyish, and does not entirely cover its summit; while the centre of each circle is entirely sound. Ulceration rarely occurs in this variety; the tubercles gradually subside and leave behind them a livid red spot, which also vanishes after some time. It is never primary, and principally shows itself on the forehead and neck.

2. *Disseminated tubercular syphilitic eruption.*—In the other cases the tubercles are larger and collected irregularly into groups; they are oval or pyriform, and very prominent, being sometimes as large as a small olive. Their summits are smooth, shining, and

free from desquamation; they are unattended by pain, and may remain indolent for years together. They rarely, if ever, ulcerate. This variety is always secondary, and generally occupies the face, cheeks, or nose.

3. *Perforating tubercular syphilitic eruption.*—In a great number of cases we find large, isolated, round tubercles, few in number, of a purple red tinge, and surrounded by a copper-coloured areola, seated on the face, and especially on the upper lip or nose. These may remain stationary for some time, but at length become tense and painful; an erythematous blush surrounds them, of a peculiar, deep violet colour. The summit of the tubercle soon ulcerates deeply, and a thick scab is formed. Fresh tubercles now form in the neighbourhood, progress rapidly, and the ulcers soon coalesce to give rise to a large, black, and extremely tenacious incrustation of matter. If the scab be removed, we find underneath an irregular ulcer, with cleanly cut edges, formed by indurated and engorged tissue of a purple colour. The centre of the ulcer is always more or less excavated. Fresh scabs now form, and as they are detached, we find the subjacent parts more and more destroyed. Thus the side of the nose or a portion of the lip is removed; the portion of tissue which remains is of a violet-red colour, and always presents more or less of a circular form. In cases where the whole nose, with its bones and cartilages, has been destroyed, many of which we have seen at St. Louis, the disease almost always commences in the hard parts, and destroys from within outwards. This form is always consecutive.

4. *Serpiginous tubercular syphilitic eruption.*—In the fourth variety we have tubercles sometimes as large as a hazel-nut, hard, round, and of a red colour, scattered over different parts of the body, but generally seated on the back. They are not covered by scales, and may remain stationary for a considerable time; finally, however, they ulcerate, and the ulcers extend from them to the neighbouring tissues, which they destroy in a curious manner. They describe circles or segments of circles, spirals, zig-zags, figures of all kinds, &c., are superficial, and generally a few lines broad only. They are covered by thick, hard, black, and very tenacious scabs, and when they heal, leave irregular scars, which are never got rid of. In the majority of cases new tubercles are

constantly appearing, and the ulceration passes from one to another, healing in one place, while it breaks out elsewhere. We saw a patient in Biett's wards covered from head to foot with tubercles of this kind; the face, the scalp, arms, and back were traversed by long irregular scars, spotted with large red tubercles, and every now and then the diseased parts were the seat of serpiginous ulcers, concealed under thick scabs. This variety is always a secondary affection.

5. *Syphilitic eruptions with flat tubercles.*—Finally, we have a variety of tubercular syphilis, which is sometimes a primary symptom. Here the tubercles are round, thick, and flat, and perforated on the top by small linear ulcers. The tubercles are occasionally as small as lentils, at other times thick, of a deep livid red colour, and as large at the base as a shilling; the former are found chiefly on the sides of the nose and lips; the latter on the scrotum, penis, pubes, thighs, and anus. The summit of the tubercle soon ulcerates, and presents the appearance of a narrow slit, from which a sanious, fœtid matter is discharged. The whole scrotum is sometimes covered by these tubercles; they are isolated, perfectly round, and very prominent. Around the margin of the anus they may coalesce, and form larger surfaces, but the ulceration is always superficial. This form is most frequently secondary.

Papular syphilitic eruption.—This consists in the eruption of small elevated points, which are hard and solid, contain no fluid, and terminate in resolution or desquamation; but never ulcerate. The papular syphilitic eruption may be acute or chronic.

In the first variety (*lichen syphiliticus; scabies venerea*), the papulæ are exceedingly minute, slightly conical, and often in immense numbers; they are of a copper colour, and the deep areola which surrounds them sometimes gives the skin the appearance of a large copper plate sprinkled with a number of elevated points a little less deep in colour. They often co-exist with gonorrhœa, or come out soon after its disappearance, a circumstance which confirms the opinions of Carmichael. The papulæ usually occupy the whole of the body, and especially the face, coming out within the space of twenty-four or forty-eight hours. Generally speaking, there are no constitutional symptoms, but we have sometimes seen

them preceded by headache and some fever, and attended with pretty smart itching.

This is one of the least formidable varieties of syphilitic disease of the skin. Bateman says that the papulæ sometimes ulcerate, and certain writers even go so far as to say that if left to themselves, they always end in ulceration and the formation of purple-coloured scars. This is clearly an error. When abandoned to nature, they often disappear in a short time after slight desquamation. Ulceration of the point of the papule may some times occur, as it does in *lichen agrius;* but this is exceedingly rare, and when it does happen, the ulcer leaves no cicatrix behind it. But it is worthy of note, that occasionally the papules are followed by small cicatrices, without having been preceded by ulceration. Most usually, however, the eruption fades at the end of a few days, with slight desquamation, leaving only small stains, which soon disappear.

The second variety of syphilitic papular eruption is a chronic affection; the papulæ are large, flat, and of a copper colour, very prominent, and of a regular circular shape. They first appear as small yellow points, which gradually rise into indolent papulæ, without areolæ; they are commonly collected together in great numbers, free from itching, and the intervening skin is of a dirty and faded appearance. They chiefly occur on the limbs, in the line of extension, the forehead, and hairy scalp. In all cases they are a secondary symptom, and generally accompany other constitutional signs of the disease, especially pustules. They commonly terminate in the following manner: The summit of each papule is covered by a dry, greyish pellicle; this falls off, and is perpetually renewed, until the papulæ sink to the level of the skin, leaving nothing but a greyish white spot, which persists for a considerable time. When the eruption is very thick, the desquamation is sometimes so abundant as, at the first glance, very much to resemble a *scaly* affection.

Scaly syphilitic eruption.—Sometimes the skin is the seat of small copper-coloured elevations, covered by scales, &c.; these we have referred to scaly affections, and divided into several varieties. This form is always consecutive, and usually of very long duration. It terminates by resolution and desquamation, never by ulceration; and never leaves scars.

1. *Syphilitic Lepra.*—One of the most remarkable forms of this

eruption is that in which the spots, analogous to those of lepra, are of a deep grey, almost black colour; this probably has often been described as a variety of simple lepra (*lepra nigricans*). It is a very rare complaint, but we once had an opportunity of observing a curious example of it in the wards of Biett at St. Louis, in a patient in whom the eruption disappeared under the influence of abdominal irritation, and again appeared, so well marked that we could trace its development very satisfactorily.

The leprous spots, in this case, were perfectly round, from two or three lines to six or eight in diameter; they were raised at the edges and depressed at the centre, and were of a very dark colour, especially in the centre. The scales were thin, dry, friable, and but slightly adherent; underneath them the elevated surfaces were smooth and shining. The affection gradually disappeared under the influence of an internal inflammation; the scales ceased to be formed; the edges of the leprous spots subsided, and at length nothing remained but a dark round stain. At the expiration of six weeks, the internal disease was cured, and the cutaneous affection broke out afresh; the leprous spots commenced in the centre of the old ones, and soon assumed their original appearance; the elevated points which subsequently constituted the spot were not of the same colour at first as the stain in which they formed, but were of a coppery-red colour; a few discs appeared on the healthy skin, and here they were not preceded by a deep red spot, as is the case in lepra, but by a greyish injection of the skin, without heat or itching. The skin, in the intervals, was of a dirty hue, and the patient emitted a very peculiar smell.

Syphilitic lepra may be general, as in the case just mentioned; it is very seldom a primary symptom, though Biett used to mention a remarkable case in his clinical lectures, where it broke out a short time after unclean connexion.

2. In the majority of cases this form assumes the characters of *psoriasis*, and most usually of *psoriasis guttata*. The spots may be confined to one region of the body, but they generally occupy the neck, back, chest, and abdomen at the same time, or the limbs, face, and scalp. They vary in size from the diameter of a farthing to that of a half-crown piece; they are generally isolated and irregularly circular, a little elevated above the surface, and covered by

thin, hard, greyish, tenacious scales, which fall off and expose a smooth, shining surface, of a coppery tint, unlike the red, fissured elevations of psoriasis. Even when more allied to psoriasis guttata, they present a peculiar appearance, which Biett considers as pathognomonic; this is a small, white border, surrounding the base of each disc at the point where it commences to rise above the level of the skin, and evidently produced by laceration of the epidermis. Some writers pretend that this is a sign of little importance, inasmuch as it is common to other cutaneous affections, as in vesicular eruptions, and especially in varicella; but these assertions are erroneous. The venereal border adheres firmly to the circumference of the spot, which is not the case in varicella.

In some cases several spots coalesce, and form a large copper-coloured discoloration, covered here and there with scales, which fall off, and are reproduced slowly. The disease generally commences on the arms, whence it extends to the chest, back, and face; the first thing seen being small copper-coloured points, which cause considerable itching, extend gradually, and as they become elevated, are covered by scales.

3. *Horny scaly syphilitic eruption.*—Finally, this form of scaly syphilitic eruption appears solely on the soles of the feet or palms of the hands, in the variety denominated by Biett the *horny*. It commences by slightly elevated points, of a copper colour; these are elevated in the centre, and covered by greyish, hard, fissured scales, which become very numerous, and as they coalesce form a kind of spot, divided by crevices or fissures. Biett has termed this variety *horny*, from the horny, cylindrical substance which in old cases occupies the centre of the spot. It very rarely exists alone, but is generally accompanied by other symptoms of constitutional syphilis.

The various forms of syphilitic eruption just described may occur together in the same individual. Thus papulæ often exist with pustules, and the latter with tubercles. In general the scaly forms occur without complication of any other, but like the rest, are almost always attended by constitutional symptoms of syphilitic infection.

Concurrent symptoms.—The cutaneous forms of syphilis may be

complicated with all the other symptoms of that disease, but we shall confine ourselves at present to such as most frequently co-exist with syphilitic eruptions.

The most common are ulcerations of the throat, amygdalæ, or posterior part of the pharynx, easily recognised by their peculiar form and appearance, and which consist, as Hunter says, in a real loss of substance, as if a part of the tonsil or of the mucous membrane of the pharynx had been removed, presenting regular edges and an excavated centre, covered with very adherent greyish matter. Next come pains in the bones, inflammation of the periosteum or exostosis. These chiefly occur in the superficial bones, as the tibia, ulna, and bones of the cranium. Hunter thought that this tendency depends on the exposure of such parts to cold, but more recently these affections have been attributed to the use of mercury: the latter opinion does not seem to be correct; since the year 1816 up to his death, Biett had seen every year from five to six hundred persons who, in consequence of their peculiar occupations, were literally saturated with mercury, yet he never witnessed any disease of the bones or exostosis amongst these individuals.

A frequent attendant symptom of venereal eruptions is *iritis*, the syphilitic nature of which has been established by Saunders, Wardrop, and more recently by Lawrence. The importance of this complication induces us to say a few words on it. Iritis commences with violent pain in the head, followed by dull, deep pain in the eyeball, increased on the admission of light: the pupil now contracts uniformly, and the movements of the iris are gradually impeded; its circular fibres assume a deeper or a reddish tint, and the edge of the iris loses its regular appearance. At a later stage the pupillary margin becomes angular, the iris is tumefied, and advances towards the cornea; small abscesses form and open into the anterior chamber, and unless the disease be arrested, it makes a rapid progress: the inflammation extends on one side to the capsule of the lens, which gradually loses its transparency; while on the other the cornea becomes opaque, and coagulable lymph is effused, causing adherences which may be altogether fatal to vision.

Another attendant symptom of syphilitic eruptions, is the tumour denominated *gummy* by some pathologists, and to which Biett has particularly directed attention in his clinical lectures.

These tumours appear to spring from the laminated tissue underneath the skin; the first symptoms are a slight uneasiness and elevation of the affected part, with a livid tinge of the integument, but when the tumour is deep-seated, the skin may retain its natural colour. The progress of the disease is slow; the tumour gradually becomes more prominent and the colour more livid, especially over the point where it is about to give way; and then some obscure fluctuation is perceived. The tumour may terminate in resolution, and of this Biett mentions a remarkable example; but more frequently the skin gives way, the edges of the fissures are lacerated, and in two or three days a large venereal ulcer, with its clean cut edges, appears.

Such are the constitutional symptoms which commonly co-exist with venereal affections of the skin; but there are many others of a similar nature, or unconnected with syphilis. Thus the patient may be cut off by ulceration of the bowels; or erysipelas may ensue on syphilitic eruption of the face, when the latter disappears for a time. Lastly, they may be accompanied by ozœna, destruction of the cartilages of the ears, scirrhous enlargement of the testicles, or inflammations of various organs, by which the progress of the cutaneous affection is more or less modified. They may be complicated with non-syphilitic eruptions, as eczema, herpes, and particularly the itch. They often cause baldness. Different elementary forms of eruption may also appear at the same time, as papulæ with pustules or tubercles. The scaly form is found most frequently alone.

Pathology.—Patients are never cut off by the cutaneous affection itself, although they sometimes sink under the constitutional symptoms which may accompany it. The post-mortem researches of Biett have disclosed a great variety of lesions—necrosis, exostosis, caries of the bones of the foot, &c., and fistulæ. In one patient, who died with all the symptoms of laryngeal phthisis, he found ulceration of the mucous lining of the larynx, with caries of its cartilages, and a fistulous canal opening externally. In other cases he has found peculiar ulcerations of the intestinal canal, and chiefly near the cœcal valve. An effusion of serum also frequently exists in some of the great splanchnic cavities. Most of the bodies of those

who die with these symptoms have a peculiar and fœtid odour, and decompose very rapidly.

Causes.—Syphilitic diseases of the skin may be excited by a great number of occasional causes, such as severe exercise, excess in eating, violent passions, an attack of fever, irritating applications, active medicines, wounds, contusions, &c. Sometimes it is impossible to discover any exciting cause, but in every case the remote and invariable cause is syphilitic infection. Under certain circumstances they are clearly contagious, and may be transmitted from parent to child; infants are occasionally born with syphilitic pustules, or the eruption may break out shortly after birth. In other cases the infant contracts the cutaneous affection from its nurse; or an apparently healthy infant, if born of a mother labouring under the disease, may communicate it to a perfectly healthy nurse.

The cutaneous affection, however, in the majority of cases, breaks forth without any appreciable cause, and while the individual seems in the enjoyment of the best health; but it may be excited by mental emotion, excess of any kind, or the influence of another disease; sometimes it is preceded by general derangement of the economy, or headache, depression, febrile languor, &c. Experience proves that it may succeed gonorrhœa, as well as chancre and bubo, and *vice versa*.

The relation between any particular form of primary symptoms and a particular form of eruption which Carmichael endeavoured to establish is not sustained by facts. The form of the primary disease has no influence upon that of the eruption which succeeds it.

Age has no effect upon the appearance of syphilitic eruptions; they are of more frequent occurrence from twenty to thirty years of age, because the primary disease is most common at this period.

Cold is more apt to act as a predisposing cause of these eruptions than heat.

Facts seem to prove that they occur much less frequently after a mercurial course of treatment than after simple treatment alone.

Diagnosis.—Although the characters of syphilitic eruptions are clearly marked, they are often overlooked, or mistaken for other diseases of the skin. Their symptoms, however, are very distinct, and the experienced eye will seldom fail to detect a certain *ensemble*,

which is difficult to describe, depending on the peculiar colour and arrangement of the eruption, and general state of the patient. We cannot, as some pathologists pretend, place any reliance on the influence or failure of mercury as a diagnostic sign.

1. The diseases most likely to be confounded with *syphilitic exanthematous affections* of the skin, are roseola, urticaria, and ephelis; the two former bearing some resemblance to acute, the latter to chronic exanthematous syphilitic eruption.

Roseola.—This affection differs from the greyish spots of the syphilitic variety in its colour, which is light red, and in the general symptoms accompanying it. The progress of syphilitic roseola is quite different from that of the simple disease; but we should not forget that at an early stage of the exanthema the spots present a reddish instead of a copper colour; as the disease advances, they assume a deeper tint, while in common roseola they gradually fade, and soon disappear altogether.

Urticaria.—The small spots of urticaria, arising without any apparent cause and attended with itching, bear some resemblance to acute exanthematous syphilide; but the colour of the spots is different in the two affections; in the former they are either whiter or more red than the healthy skin, never of the grey colour peculiar to the syphilitic eruption; they are likewise more elevated, and attended with greater itching; finally, they disappear suddenly and break out again after some time, a circumstance which never occurs in the syphilitic variety. Acute exanthematous syphilitic eruption almost always accompanies gonorrhœa or primary venereal symptoms, or at least appears very soon after their cessation.

Ephelis.—The ephelides differ from syphilitic blotches in several respects; they are usually larger and irregular in form, occupying a more extensive surface of the body, and particularly the abdomen and chest. Syphilitic spots, on the contrary, are round, and seldom larger than a half-crown piece: they are generally few in number, and chiefly seated on the forehead, face, or eyebrows. Ephelides are of a yellow colour, covered by a furfuraceous exfoliation, and attended with some itching. Venereal spots are of a red copper tinge, occasion very slight if any pruritus, and are rarely covered by epidermic scales. Finally, they never coalesce, like the ephelides,

to form irregular discolorations which may cover a very large portion of the body.

Syphilitic maculæ are almost always accompanied by some other venereal symptoms, and are often complicated with iritis.

Elephantiasis Græcorum.—Syphilitic maculæ may be confounded with this disease at its commencement. But in elephantiasis, the spots are of a fawn colour ; the skin is smooth and shining, and there is insensibility of the spots, which is pathognomonic of this disease. The history of the case will also afford aid in the diagnosis ; and in the case of elephantiasis, it can always be traced to the country where it is endemic.

2. *Vesicular syphilitic eruption* is especially characterised by the persistence of the individual vesicles, the copper-coloured areola about their base, their number and arrangement, which distinguish it entirely from varicella and eczema. In the impetiginous variety, the syphilitic form is known by the adherence and dryness of the scabs, the ulcerations, &c. The coppery colour of the syphilitic form, which extends to the centre of the patches, will distinguish it from herpes circinatus.

3. The *pustular syphilitic* eruption may be confounded with acne and ecthyma.

Acne.—The pustules of acne, especially those seated in the forehead and face, resemble psydraceous syphilitic pustules, but they are more prominent, red, and surrounded occasionally by an erythematous areola, whereas the latter are of a purple colour and inclosed by a copper-coloured circle. The intervening portions of skin in acne are red, shining, of a greasy appearance, and covered with small dark points ; in the venereal eruption they are of an earthy hue and faded appearance. Finally, the syphilitic pustules are often succeeded by small scars, which seldom occur except in cases of *acne indurata*, where the cicatrices are of a different character, being oblong in acne and round in the syphilitic disease.

Ecthyma.—It is sometimes exceedingly difficult to distinguish phlyzaceous syphilitic pustules from those of ecthyma ; but the areola of ecthymatous pustules is of a purple-red colour, while in syphilis it is always copper-coloured. The incrustations of the latter are thicker and more tenacious, and sometimes almost black ; they are, likewise, fissured all round the edges ; the ulcers which

follow them are round and deep; their edges perpendicular, &c., and they constantly produce depressed and indelible scars. Finally, they are usually attended by other signs of constitutional syphilis.

4. *Tubercular syphilitic eruption.*—The cutaneous diseases likely to be confounded with tubercular syphilis are lepra, some varieties of psoriasis, acne indurata, and lupus.

Lepra.—In the syphilitic affection, although the spots are sometimes circular, they are never so completely so as in lepra; they are formed by isolated, smooth, prominent tubercles of a purplish or copper colour, covered by thin, hard lamellæ, which are always smaller than the subjacent induration; the scales of lepra are larger, and cover the edges of the spot, its centre, or even the whole of it.

Psoriasis gyrata.—Tubercular syphilis, partially cured and presenting imperfect circles, has often been mistaken for psoriasis gyrata; but the points of difference which apply to lepra will serve as means of distinguishing it from this affection likewise.

Psoriasis guttata.—It seems certain that tubercular syphilis of the scrotum has been frequently confounded with psoriasis guttata, which is but seldom seen on that part; but the former is characterized by round, thick, flat tubercles, which ulcerate at their summits, and discharge a sanious and very fœtid matter; while in the latter disease we have merely dry eminences of a papular appearance, which are covered by scales of various sizes, but never terminate in ulceration.

Acne Indurata.—This variety of acne may be followed by circumscribed indurations, which occasionally resemble those of syphilis in being separated by a number of cicatrices; but the tubercles of the venereal affection are hard, copper-coloured, round, and often as large as hazel nuts; they have not, like the circumscribed indurations of acne, been preceded by pustules; they frequently ulcerate and burrow underneath the skin to a considerable extent, are covered by thick scabs, and leave behind them, not the oblong cicatrices of acne, but irregular tortuous scars.

Lupus.—It is sometimes no easy matter to distinguish the nascent tubercles of lupus from those of tubercular syphilis. Those of lupus, however, are reddish, soft, and but little developed; they are

fissured or shrivelled at the summit; the adjacent skin is slightly œdematous; the tubercles of syphilis are more prominent and harder; smooth, shining, and of a copper colour. Lupus generally commences on the cheeks, while the venereal tubercle most frequently attacks the forehead or sides of the nose. Finally, lupus occurs mostly in individuals of scrofulous habit and young persons of lax fibre, while the venereal tubercle is usually found in adults, and is, besides, almost always attended by other signs of constitutional syphilis.

5. *Papular syphilitic eruption.*—This variety should be distinguished from lichen and scabies.

Scabies.—The syphilitic papular eruption is sometimes very small, slightly conical, and, if some writers are to be credited, presents the transparent serous collections so characteristic of scabies; but the least attention will suffice to show that the disease is a papular and not a vesicular one.

Lichen.—Syphilitic lichen may be distinguished from *lichen simplex* by the following signs: The papulæ of the former are very small and numerous, slightly conical, of a deep colour, and the areolæ sometimes coalesce to form a large copper-coloured blotch, dotted with fine points; in lichen simplex the eruption is generally confined to a single region of the body, particularly to the limbs; in the syphilitic variety it covers the whole body, is most abundant on the face, and the papulæ make their appearance nearly at the same time in the different regions.

In some cases of syphilitic papulæ, the papules are flattened, broad, and covered by small scales, which conceal the intervening healthy spaces, and give the disease some resemblance to the *scaly* variety; but the two forms now spoken of could only be confounded at a particular period of the disease; in its early stage the papulæ are perfectly distinct, and at a later period are again easily recognised, when the scales have fallen off; the progress of the eruption, then, will sufficiently demonstrate its nature.

6. *Scaly syphilitic eruption.*—The diseases from which this form should be distinguished are psoriasis and lepra.

Lepra.—When the edges of the scaly syphilitic eruption are prominent, and the centre of the spot depressed, it may be mistaken for *lepra*, as the only diagnostic mark is its coppery colour: in

lepra nigricans the very dark colour of the spots is quite characteristic.

Psoriasis.—The syphilitic cutaneous affection may occasionally simulate *psoriasis*, and especially, *psoriasis guttata ;* in the former, however, the colour is coppery ; the spots are covered by small, thin, grey scales, which are much thinner than those of psoriasis ; and finally, they are surrounded by the white rim altogether peculiar to them.

Such are the different affections which more or less resemble syphilitic diseases of the skin : we may add, that, in addition to their distinctive characters, the latter are generally attended by certain constitutional symptoms, the presence of which is of much aid in a diagnostic point of view. It remains for us to say a few words on two conditions sometimes attending cutaneous diseases, and giving them some resemblance to analogous affections of syphilitic origin : these are, incrustations and ulcers.

7. The *incrustations* of syphilitic pustules or tubercles may be mistaken for the scabs of *impetigo;* but the latter are yellow and easily detached ; while those of syphilis are greenish or nearly black, hard, and in all cases excessively tenacious, penetrating more or less deeply into the skin.

8. Syphilitic *ulcers* may resemble those of *lupus*, but if we remember their peculiar characters, we cannot easily confound them. The venereal ulcer is deep and excavated, its edges hard, cleanly cut, and surrounded by a copper-coloured areola ; the ulcer produced by lupus is more superficial, its edges soft and violet coloured ; the surrounding skin is generally engorged, and, as it were, œdematous. When lupus spreads, its ulcerations do not assume those spiral or zigzag forms which characterize *serpiginous* syphilitic ulcers. But when the diseases are confined to a small portion of the body, the nose for example, and destroy the parts on which they have fixed, it is not so easy to distinguish them. We should remember, however, that in lupus the destructive process almost always commences in the skin, while in syphilis it has its origin in the bones ; in the latter it is much more rapid, and finally is attended, as we have so frequently observed before, by other constitutional symptoms.

Prognosis.—Syphilitic diseases of the skin are seldom dangerous.

The tubercular, and some varieties of the pustular form, are the most severe; the scaly eruption is often very obstinate; all the rest are, generally speaking, of shorter duration. The prognosis is less favourable when the patient has long suffered under syphilis, or been the subject of several relapses, and when the cutaneous affection is complicated by several other constitutional symptoms. In the latter case, the patient may sink into the most frightful state; the pulse becomes weak, the face loses its colour, diarrhœa sets in, blood is discharged from the nostrils, and death ensues.

Treatment.—It were useless to enumerate the long list of remedies which have been employed in the treatment of constitutional syphilitic affections; we shall, therefore, confine ourselves to a consideration of those, the utility of which has been demonstrated by experience.

The antiphlogistic method, and the use of emollients, have been vaunted as sufficient to effect a cure in the majority of cases; but from considerable experience we must say: 1st, that they are often useful, and occasionally indispensable as auxiliaries; 2nd, that sometimes, though very rarely, they will effect a cure; 3rd, that in the immense majority of cases they fail, except in acute papular or exanthematous syphilides, which are in general temporary eruptions, appearing and disappearing with the primary symptoms.

In the treatment of syphilitic eruptions, both *internal* and *external* remedies are used.

The remedies sanctioned by long experience are the following:—

Mercury.—The preparations of mercury are, beyond doubt, the most useful remedies that we possess against syphilitic diseases of the skin; though sometimes unsuccessful, they answer our fullest expectations in a great majority of cases, and it seems probable that their occasional failure may depend on the manner in which they have been administered. Thus, mercury ought never to be given in the acute stage of a syphilitic disease of the skin. It is impossible to lay down any positive rules for the quantity that should be administered, this depending on the patient's constitution, the nature of the symptoms, the effects of the medicine, &c. We may

employ Van Swieten's mixture, or pills composed of corrosive sublimate and opium. When the patient is weak and irritable, and it is expedient to avoid excitement of the digestive apparatus, we may have recourse to the *soluble mercury* of Hahnemann, in the dose of a grain daily. Among preparations of this article, the *proto-chloride of mercury*, although sometimes too mild, has often a very good effect in certain cases of affection of the pituitary membrane, used by insufflation; and the bichloride of mercury, a very efficacious remedy in venereal eruptions, but which is apt to disagree with patients; and especially the proto-iodide of mercury, introduced into practice by Biett, and which time and experience have proved to be, at present, the best article for the treatment of syphilitic eruptions.

When carefully administered, mercury seldom produces any injurious effects; still, we must observe closely the state of the digestive organs during its use, and suspend it if symptoms of irritation supervene. The time during which it is to be employed must depend on the effects of the remedy; but we cannot agree with some writers, that the treatment should be continued for a month or longer after the disappearance of the symptoms, with a view to preventing a relapse.*

Sudorifics.—This class of remedies is of much value, in combination with other means of a more active nature. The sudorifics generally employed are the decoctions of guaiacum, sarsaparilla, and mezereon; an ounce of the sudorific syrup may be added to the first dose of the remedy, taken in the morning before eating.

* Gibert says that the mean duration of this treatment has not exceeded five weeks, but that he considers it prudent, as a general rule, to continue it longer, and usually does so in private practice. (*Mem. de l'Acad. Roy.*, vol. x., 1843.)

M. Cazenave says in another place (*Traité des Syphilides*, Paris, 1843), that if the eruption is slight, and it disappears at the end of a month or six weeks, the treatment must be continued a month longer, diminishing the doses by gradually decreasing one-third of the whole quantity. When the treatment is protracted, the patient may be allowed intervals of rest of fifteen days at a time. Rayer recommends a continuance of the treatment for fifteen days, and even a month, after the entire disappearance of the symptoms. Other writers recommend its continuance for two months in ordinary cases, and three or four months in severe ones.

Tizan of Feltz.—This occasionally succeeds in cases where mercury fails; the patient may take two or three glasses a day. (See Formulary.)

Muriate of Gold.—This preparation has been highly spoken of, but its advantages have been greatly overrated; we have seldom seen it succeed. A tenth of a grain may be applied in friction on the tongue twice a day.

Subcarbonate of Ammonia.—A speedy cure has been sometimes obtained through means of this remedy, especially in cases where mercurial preparations fail. Biett was in the habit of commencing with a drachm, in some mucilaginous fluid, and gradually increasing the dose to two or three drachms during the day.

Acids.—Biett frequently administered nitric and sulphuric acids with benefit in certain forms of syphilitic disease of the skin. We have often seen simple cases, syphilitic roseola for example, cured in this way; and even inveterate cases, especially some forms of the pustular eruption, will sometimes yield to the acids after having resisted much more active remedies.

Iodide of Potassium.—This article has of late years been highly praised as a remedy for secondary syphilis; still, when used alone, it is less efficacious than the proto-iodide of mercury; but is exceedingly valuable when the system is suffering under syphilitic cachexia.

The internal treatment will occasionally require the aid of external medication. Thus the resolution of syphilitic tubercles may be assisted by the use of ointments containing the proto-nitrate, proto-iodide, and bin-iodide of mercury. Gentle inunction should be made with the finger over the largest tubercles. The most efficacious ointment, however, is one composed of twenty or thirty grains of the iodide of sulphur to an ounce of lard. We saw Biett employ this remedy with good effect in a case where nearly the whole body was covered by scars and large tubercles. As for the different lotions recommended by some writers, we reject them altogether; they are either useless or injurious.

The venereal ulcer may sometimes require a mode of treatment especially suited to it; thus it may be necessary to arrest the destructive progress of the sore, or modify its condition by the use of an ointment containing the deutoxide, bin-iodide, or cyanuret of

mercury. In other cases we may be compelled to cauterize with the binitrate of mercury; and Biett often succeeded in alleviating the severe pain attending these ulcers with small pledgets of lint, smeared with the hydrocyanic cerate.*

The remedies just mentioned will receive powerful aid in the proper administration of baths, &c. Thus alkaline baths are beneficial in most cases of venereal pustular eruption; and the resolution of tubercles is considerably aided by directing a vapour douche for twelve or fifteen minutes over the affected parts. Vapour baths contribute in no small degree to the cure of scaly syphilitic eruptions. The flat pustules of Cullerier, which so frequently appear on the scrotum and round the margin of the anus, generally yield to the use of fumigations with cinnabar.

Several experiments have been recently made with baths containing corrosive sublimate; but we do not think that they have been conducted with sufficient care to draw any conclusions from them. The corrosive sublimate was generally added to water containing a quantity of alkaline salts, and must necessarily have undergone some change; besides, the action of the remedy, when administered in this way, must be extremely variable, and, in some cases, not unattended by danger. Our own experience thus far authorizes us in regarding this mode of treatment as always inefficacious, and as possibly dangerous.

Under certain circumstances which, unfortunately, are not very rare, syphilitic diseases of the skin resist all the modes of treatment just pointed out, and become complicated by alarming symptoms of constitutional infection. In such cases we have seen the best effects produced by the administration of opium, commencing with half a grain in the day, and gradually carried (by increasing the dose every three or four days by half a grain) to four grains, or even more, daily. Under the use of this powerful remedy, the symptoms often improve in a very rapid manner, and the most inveterate affections are completely removed.

Finally, in some cases, where the resources of the regular prac-

[* In addition to constitutional treatment, M. Ricord recommends for these flat pustules a lotion of one part of chloride of soda to four of water, to be used three or four times daily; the parts are then to be dried, and well sprinkled with dry calomel.]

titioner are exhausted, the disease has rapidly yielded to empirical remedies. Of this we have seen many remarkable examples in the wards of Biett, particularly with the decoctions bearing the names of Zittman and Arnault. The work of M. Lagneau contains full information relative to the method of Zittman; and the composition of his decoction will be found in our Formulary. We are far from recommending these empirical modes of treatment; but we must acknowledge that we have seen them succeed in the most desperate cases, where every other remedy had been tried in vain. The decoction of Zittman sometimes produces diarrhœa, which compels us to suspend its administration for a short time; but, in the majority of cases in which we have seen it tried, the patients bore it well enough; and it was almost invariably successful, even in the most desperate cases.

The symptoms attending syphilitic eruptions will, of course, require special treatment. In ulceration of the throat, palate, &c., we may employ, with advantage, gargles containing the bichloride of mercury and a few drops of laudanum. In *iritis*, general and local bleeding will often be requisite; but calomel, in large doses, is the remedy which we have found most efficacious. When an infant at the breast is attacked, the nurse should take Van Swieten's solution, or, what is still better, employ frictions with the Neapolitan ointment, and camphor over the legs and thighs. Should the nurse be too weak to undergo a course of mercury, the infant must be fed with the milk of goats treated in a similar manner. We have seen the best effects produced by this mode of treatment at the dispensary attached to the Hospital of St. Louis.

[*Iodides of Mercury.* Of all the mercurial preparations, and of all the remedies of whatsoever kind, which have been recommended in the treatment of the syphilides, none can approach, in therapeutic value, the iodides of mercury. We are indebted to Biett for the introduction of these valuable remedies in the treatment of the venereal eruptions. This practitioner at first preferred the biniodide, and administered it in pills in the following form: Biniodide of mercury, ten grains; liquorice powder, one drachm; make sixty pills. Dose, from two to three *per diem.* But he soon relinquished this preparation for the more manageable and more

efficient proto-iodide of mercury. This is undoubtedly one of the most valuable remedies we possess, and it is certainly that, under the influence of which we can almost invariably modify, if we cannot cure, the syphilitic eruptions. This agent seems to acquire a double value from the combination of iodine with mercury. In the great majority of cases it is borne easily by the patients, and may be continued for a considerable period without causing any inconvenience. It seldom occasions salivation. Like all the mercurial preparations it may derange the digestive organs, and occasion diarrhœa; but these accidents occur but seldom, are slight in their nature, and speedily disappear on the temporary suspension of the medicine. The skin is specifically influenced by the proto-iodide of mercury. The patches of disease assume a more lively and healthy aspect, and evince a tendency to resolution. But the beneficial influence of the remedy is not confined to the skin, for the general condition and aspect of the patient undergoes a remarkable alteration. The countenance becomes more animated, and the eruption advances towards resolution with a rapidity which, in some instances, is really surprising. It is worthy of note, that when the administration of the proto-iodide is likely to be followed by beneficial results, these latter will begin to appear in the course of a very few days from the commencement of the treatment. M. Cazenave relates a number of cases in support of the remedial efficacy of the proto-iodide of mercury in the syphilitic eruptions. In his admirable work on the syphilitic eruptions of the skin, he has not in the least exaggerated the merits of this excellent remedy, for I have seen all that he has said in favour of it fully borne out in practice, in his wards at the Hospital of Saint Louis, and also in this country. We cannot avoid giving in full the following remarkable case related by the author, in favour of this method of treatment:

"M——, aged 30, holding a situation in a public office, was admitted into the Hospital of Saint Louis on the 15th of June, 1834, to be treated for an aggravated form of syphilis, which had occasioned a general cachectic state of body. This patient enjoyed good health up to the age of eighteen, when he contracted a blennorrhagia, accompanied by chordee, which was cured by antiphlogistic measures. In the space of eighteen months after this, he contracted chancres twice. In one case he was cured by the internal administration of

calomel, and in the other by simple emollients. Since that period he has been attacked six or seven times by the same complaint, always at the base of the glans, and without concurrent ulceration of the mouth or throat. Six or seven years before his admission to the hospital he suffered from what he called an obstruction of the liver, accompanied by jaundice. Three years from his admission, and without any intermediate symptom, M—— was attacked by swelling and superficial caries of the frontal bone. These symptoms were treated by mercurial inunction, which occasioned violent gastric derangement. New tumours appeared upon different parts of the head, and disappeared without any treatment, and without occasioning injury of the bones. Soon after this the patient was obliged to perform a long and fatiguing journey from Strasburg to Bayonne. Immediately after his arrival at the latter place he was attacked by severe pain in the head, congestion, and dyspnœa. The patient was bled freely, the original pains were removed, and a violent coryza ensued, unattended by inflammation of the nose. Emollient fumigations were applied to no purpose.

"The pain was renewed in an aggravated form, and thick scabs, accompanied by fragments of bone, were discharged through the nostrils, and at once declared the real nature of the disease. Three months after the appearance of the coryza, a small pimple showed itself on the palate, broke, was converted into an ulcer, and spread rapidly. In two months the roof of the palate was perforated, and fragments of bone were discharged by the mouth and plates of the nasal bones through the nares. These symptoms disappeared under treatment by mercurial friction and Van Swieten's liquor, and the hole in the palate was partially filled up. A month afterwards the dyspnœa, congestion, and nasal hæmorrhage were renewed, and small ulcerations appeared on the right ala of the nose and on other parts of that organ. The lesions of the palate and nasal fossæ reappeared, and the right cheek was covered with tubercles, which were presently converted into irregularly-shaped ulcers, with sharp cut edges and greyish base. He now came to Paris, and was treated with Van Swieten's liquor, which only produced an exasperation of all the symptoms. Although his diet was confined to milk, the constitutional disturbance continued, the disease proceeded with unabated violence, and the destruction of the palate was advancing

rapidly. Iodine was administered for three months without the least benefit, but rather the reverse. The patient now entered the Hospital of Saint Louis in despair, without the slightest hope of cure, and only for the purpose of terminating, to use his own expression, a miserable existence, which he even repeatedly attempted to end by violent means.

"On his admission to the hospital he was emaciated, pale, his face hideous to look at, and where the skin remained intact, it presented a yellowish colour. The whole of the nose, as far as the upper lip, was covered with thick yellowish-green scabs. These incrustations extended to the cheeks on either side, especially the right, and reposed on a well-marked copper-coloured base. A fœtid sanious matter was discharged in abundance from fissures with which the scabs were intersected, and, on examination by the mouth, a horribly offensive smell issued from it, and the frightful ravages of the disease were brought into view. Almost the whole of the palate was gone, and the destruction appeared more extensive from the indented and furrowed edges it occasioned, and the grey, malignant aspect of their borders. The left anterior portion of the superior alveolar case, deprived of teeth, was extensively destroyed, and presented the same kind of ulcerated surface as the exfoliated palate. The patient was moreover wasting from the effects of colliquative diarrhœa, extremely irritable, prescribed his own treatment, and declared that he would not take mercury in any shape, to which he attributed his present unhappy condition. Nevertheless, Biett resolved to try the proto-iodide of mercury, and, judging from former experience, with hopes of success.

"Accordingly, he deceived the patient by administering in the first instance small doses of opium, which were moreover of use in preparing the patient for the mercurial remedy. In a day or two the opium was omitted, and the proto-iodide administered for fifteen days. The patient himself was astonished at the marvellous effects of these pills, under the influence of which suppuration ceased, the scabs fell off, leaving a depressed surface of a coppery-red colour, slightly squamous, and possessing the characters of a solid, firm cicatrix. The destructive process going on at the palate and maxilla was arrested, the aspect of these parts was entirely changed, and even presented some points of cicatrization. Such was the state of

things, when a modified form of cholera broke out in Paris, spread through the hospitals, and, amongst others, M—— was attacked, but not severely. The proto-iodide, which he had taken for fifteen days only, was now suspended for eighteen days. Nevertheless, he continued to improve, although more slowly than when taking the pills. When he was scarcely convalescent from this complaint, the patient was attacked by swelling of the face from cold, which terminated in erysipelas. As soon as this affection disappeared, almost the whole of the scabs on the face fell off, the parts beneath cicatrized completely, as also the ulcerations in the mouth. During the month of August gastric symptoms supervened, and the medicine was discontinued until the end of that month. However, the patient took thirty of the pills without our knowledge, which he purchased from one of the patients in the ward.

"An attack of varicella, which lasted for six days, again interrupted the treatment, but when this eruption subsided, the proto-iodide was again administered, and continued up till the middle of October, at which period M—— was completely cured. The nose was not destroyed, but it was covered with cicatrices of a round, depressed, whitish appearance, as were also the other parts of the face attacked. In the roof of the palate there was an irregularly-rounded cavity, about the size of a half-crown piece, with cicatrized edges, and forming a free communication between the mouth and nares. The left side of the upper maxillary bone was destroyed as far as the two last molars, which were the only teeth remaining on that side. The general health of the patient was good: he was getting fat, the colour returned to his cheeks, and the skin lost the sickly tint it presented before. A plate of silver and platina was fixed where the palate was perforated, and the patient was discharged, perfectly cured."

M. Cazenave relates a number of cases of a similar nature, treated with the same remedy, and with like success. M. Cazenave usually administers the proto-iodide internally, in doses of one, two, three, to four grains *per diem*. In the mild, simple forms, not of long standing, he uses the following formula:—

℞ Proto-iodide of mercury, ten grains.
Liquorice powder, thirty grains.

Make twenty pills. Dose, to begin with, one, to be increased to two, and afterwards to four pills in the twenty-four hours.

In the severe and inveterate forms of the disease, as, for example, the tubercular varieties, where a more active and energetic method of treatment is indispensable, the same author prefers the following:

℞ Proto-iodide of mercury, two scruples.
Liquorice powder, four scruples.

Make forty pills, to be administered in the same manner as the preceding.

It is sometimes necessary to commence with two pills, and to increase the dose rapidly. The mercurial preparation should not be prescribed in too small doses. The author has repeatedly observed this remedy unattended by any beneficial results when so administered; but, as soon as the dose was increased and given freely, it had the desired effect. Biett ascertained that when opium is given in combination with the proto-iodide of mercury, the therapeutic qualities of the latter are completely neutralized: hence we should always prescribe it in an uncombined form.

Iodide of Potassium.—M. Cazenave has found the iodide of potassium to be only second to the iodide of mercury in its valuable therapeutic effects in the treatment of the syphilitic eruptions. Indeed, he seems to think that in some instances it is fully as efficacious as the mercurial preparation. Although he has occasionally observed it to cause considerable pain at the epigastrium and posterior fauces, it can generally be continued six or seven weeks, or longer, with impunity. The author uses two formulæ, a stronger and a weaker, which are prescribed according to the condition of the patient, the irritability of the constitution, and the duration and severity of the particular eruption present.—B.]

PURPURA.

SYN.—*Hæmorrhæa petechialis; Petechia; Morbus maculosus hæmorrhagicus;* Land Scurvy.

Purpura is a disease of the skin, characterised by patches of a bright red or deep violet tint, of variable extent, always retaining the colour under pressure of the finger. These patches are sometimes merely minute spots, but are often several inches in width. They are generally confined to the skin alone, but frequently appear simultaneously on the mucous membranes, and are accompanied by considerable hæmorrhage.

This affection has been incorrectly classed amongst the exanthemata by Willan. The latter eruptions are accompanied, amongst other symptoms, by febrile disturbance, inflammation and injection of the cutaneous capillary system, whilst in purpura, these phenomena are absent, and in their stead we find an *extravasation* of blood in the superficial layers of the skin. Purpura appears to us to have no analogue, and we have therefore placed it amongst the indeterminate diseases of the skin. The red patches characteristic of purpura, are often designated by writers *petechiæ*, and are always considered indicative of danger, as for example, when they occur in typhus fever, the plague, &c.

Willan describes five varieties of Purpura:—purpura simplex; purpura hæmorrhagica; purpura urticans; purpura senilis; purpura contagiosa.

1. *Purpura simplex.*—(The *petechiæ sine febre* of some writers.) The patches are of a light red colour at first, and of small extent. The eruption appears in the course of a few hours, and generally in the night; it is gradually diffused in the form of a number of distinct patches, which appear first, and most commonly, on the legs and thighs, and at a later period on the arms and shoulders, at which stage the disease is not so intense. In general several successive eruptions appear; thus, whilst the first crops fade, fresh ones are developed. In other instances a certain period of time, of various extent, intervenes between the appearance of each eruption. One of the nurses at the Hospital of St. Louis, of a strong and

healthy constitution, was subject to this disease for two years, which used to vanish for a while, and then appear again, during the whole of that period. This woman was about forty-eight years of age, and was subject to dysmenorrhœa, which generally induced a high state of plethora. The duration of purpura simplex varies from three or four weeks to eighteen months or two years. The patches last from six or eight days to a fortnight. It is frequently accompanied by giddiness, uneasiness, and lassitude, but never with any disturbance of the circulatory system. In some instances the disease appears without any symptoms whatsoever. The patches are of a bright red colour during the first few days, especially when the patient is young. In old people they are of a deeper and more livid colour, and are irregularly rounded and distinct. After the lapse of several days, they become still darker in colour, then yellowish, and at length they slowly disappear.

Causes.—Purpura simplex may occur at any period of life, but it appears most frequently in young persons before the age of puberty, and in females. It often occurs under very opposite circumstances. For example, it sometimes attacks individuals of a vigorous and sanguineous habit, in whom the circulatory power of the heart is perfectly healthy, and the tissues of the body firm ; and in other cases it manifests itself in persons of debilitated and broken-down constitutions. In general, persons of fair, soft, delicate skin are more liable to purpura than those of a dark, bilious complexion. It occurs more frequently in dry summer weather than in winter or in autumn. During the intense heat which prevails in Paris in July and August, the dispensary attached to the Hospital of St. Louis is frequented by persons labouring under this disease.

Diagnosis.—If the patches of purpura simplex are examined attentively, they cannot possibly be confounded with any other cutaneous eruptions, especially with the exanthemata. The persistence of the colour of the patches under pressure of the finger, which invariably characterizes this disease, a phenomenon that never exists in the simple and uncomplicated exanthematous diseases, is alone sufficient to distinguish these affections from each other. The bites of insects, flea-bites, &c., are easily recognised by the deep central point where the skin has been penetrated, and cannot be confounded with purpura.

Prognosis.—Purpura simplex is never a dangerous disease, even when it attacks feeble and debilitated persons. It almost invariably disappears by improving the diet of the patient, and by administering appropriate remedies.

Treatment.—When the disease appears in young and vigorous subjects, after severe exercise or the abuse of stimulants, venesection, strict regimen, tepid baths, and rest, are the most appropriate remedies. In persons of a broken-down or debilitated constitution, however, bleeding is not indicated : the treatment must be tonic in these cases, consisting of the preparations of iron, the mineral acids diluted, stimulating friction. The fumes of alcohol have been employed with success at the Hospital of St. Louis.

2. *Purpura Hæmorrhagica* (*morbus maculosus hæmorrhagicus.*)—In this variety the patches are more numerous, more diffused, and dark-coloured; some are broader than others, and of a more livid colour; others again resemble recent contusions. They generally appear first on the lower extremities, then on the arms and trunk, but rarely on the face or hands; we have, however, seen a case in which they were evolved on the eyelids. They are not usually raised above the surrounding surface; but the cuticle is sometimes elevated in the shape of blisters or bullæ : cases of this kind have been described by Biett, Bateman, and Reil. Patches of the same nature and appearance are developed on the gastro-intestinal and pulmonary mucous membranes, which frequently give way, and considerable hæmorrhage ensues, sometimes terminating fatally; but in general the sanguineous discharge is not copious; it returns again and again, and finally disappears spontaneously. In some cases it assumes a periodic character. In others, there is a continual oozing of blood. These hæmorrhagic discharges are produced by the rupture of large ecchymoses on the gums, on the tongue, on the lining membrane of the mouth, and even in the bronchi, in the stomach, the intestines, the uterus, and the bladder. We have seen a case in which there was an accumulation of blood in the arachnoid.

This variety is often preceded by wandering pains, especially in the limbs, by a certain degree of depression, and inaptitude for either mental or corporeal exercise; but in other cases, the eruption is evolved without the appearance of any premonitory symptoms, and without any apparent transition from health to disease. Biett

relates a case in which a young and vigorous man retired to rest in perfect health after his usual day's labour, and awoke next morning with extensive ecchymosis of the skin, and the blood poured in abundance from his nose and mouth.

In general, purpura hæmorrhagica is accompanied by a state of languor and great depression of spirits. The pulse is often feeble and easily compressed; in other instances, it is full and resistant; some patients experience pain at the epigastrium, and in the loins or abdomen, immediately before the patches appear. Others are subject to a dry hacking cough at that period. The digestive organs are also variously altered. Sometimes they remain in their natural condition; in other instances there is constipation or diarrhœa, with swelling and tension in the hypochondrium and epigastrium.

If these symptoms become aggravated or are prolonged, the patient emaciates, the skin presents a bloated appearance, particularly on the face and lower extremities, and when the patient has lain long in the horizontal position. The duration of this variety of purpura, like that of the former, varies considerably. It sometimes terminates in the course of a few days; in other instances it may be prolonged for several months, and even for years. When it terminates fatally, death results from one or other of the following causes:—from violent hæmoptysis, from hæmatemesis, from severe intestinal hæmorrhage, or in some rare cases from flooding, which supervenes at the termination of child-bed, or at the critical period. M. Monod relates a case in which death was occasioned by an effusion of blood into the glottis, causing suffocation.

Causes.—The causes of this variety are also very obscure. It appears under the same contradictory circumstances as purpura simplex. Sometimes it succeeds some of the exanthematous eruptions, in other cases it takes place after delivery. Purpura hæmorrhagica appears most commonly in females and in young persons before the age of puberty. Some subjects seem predisposed to the disease, in whom the slightest pressure with the finger on the skin will produce ecchymosis. The proximate cause of the disease is attributed to a want of tone in the capillary system, which allows the blood to escape upon the cutaneous and mucous surfaces. This unhealthy condition of the vascular system is supposed to arise from the same causes which debilitate and undermine the constitution.

But how are we to explain the causes which induce the disease in strong and healthy subjects? The blood itself seems to be altered so as to favour its exudation through the capillaries. We have seen it in a remarkably fluid state, even in the tissues into which it was effused. The disease was evidently preceded by a state of venous congestion. The tongue was greatly enlarged, and both it and the lips were of a deep, blue colour in some cases which we observed at the Hospital of St. Louis.

[*The pathology of purpura* is still exceedingly obscure. Modern science has thrown but scanty light upon it. The recent analyses of the blood in purpura tend to disprove the former opinion that this was a blood disease. The analyses of Frick, Parkes, and Garrod, go to prove that the fibrine may be even in excess, and that there is not necessarily any deficiency in the coagulation of purpuric blood. This is opposed to the views of Andral. The state of the vessels has not yet been ascertained; but there evidently must be rupture of the capillaries, as blood particles escape from them. Whether this depends on congestion, or on disease of the coats of the vessels, is not known. The urine is dark-coloured, scanty, of low specific gravity, has an ammoniacal odour, and speedily becomes alkaline. But hitherto the examination of this, or of any of the other fluids, has not thrown any light upon the intimate nature of the disease.—B.]

Autopsy.—In subjects dead of this disease, the purple patches and ecchymosis are perceived to result from sanguineous effusions into the cutaneous and subcutaneous tissues, one superficial, the other deep seated. The blood can easily be removed by washing, but we have never been able to discover the vascular ramifications in the neighbourhood of the effusion. Patches of purpura may sometimes be detected on the mucous membrane of the mouth and pharynx. They are generally seen scattered upon the mucous surfaces of the stomach and intestines. They are less frequently observed on the peritoneum and pleura. They are also to be seen under the pericardium, upon the surface of the heart.

Aneurism sometimes co-exists with purpura hæmorrhagica. The lungs are in some instances sound, but there is generally an effusion of blood in the parenchymatous substance of more or less extent,

constituting true pulmonary apoplexy. In other cases, partial ecchymosis may be detected in the substance of the muscles, in the viscera, and in the sub-serous tissues. In short, any organ in the body may be the seat of similar extravasation. In M. Monod's case, and that which we ourselves have seen, the brain, the lungs, the kidneys, and the spleen—in short, almost every organ in the body—were engorged, and seemed so many masses of extravasated blood. These are, however, rare cases. M. Robert has published one of a similar kind.

Diagnosis.—When the pustules of syphilitic ecthyma are set close together, they often leave behind patches and spots of a purple-red colour, which at first sight resemble those of purpura; but the pre-existence of pustules, and the progress of the disease, will clear up the diagnosis. Ecchymosis, produced by violence, cannot be mistaken for that which occurs spontaneously. Hæmorrhage never occurs either in the purple patches of ecthyma, or in the latter case. We have known a case of this complaint to be mistaken for a gangrenous disease; but such an error could not have occurred unless from gross ignorance.

Scurvy, when accompanied by spontaneous hæmorrhage and ecchymosis, appears to be identical with purpura hæmorrhagica. The distinctions described by authors as existing between these diseases, are, 1. That scurvy generally results from bad feeding, fatigue, exposure to cold and damp, depressing emotions, &c., whilst purpura hæmorrhagica occurs independently of these causes. 2. That scurvy disappears under a tonic plan of treatment, and the use of fresh vegetables, which is not the case with purpura hæmorrhagica. But in advancing that these diseases are distinct from each other in their nature and characters, it is necessary that that position should be supported on some more positive data than those now mentioned. In fact, the causes to which is attributed the development of scurvy, are the same as those which commonly produce purpura hæmorrhagica; and if the tonic treatment does not always succeed in the latter disease, it sometimes fails likewise in the former. But even admitting their identity, it is still difficult to account for the development of purpura hæmorrhagica under circumstances the reverse of those commonly associated with scurvy.

Too rich food and want of exercise may produce the same results as causes directly depressing in their nature; or the difference must perhaps be attributed to idiosyncracy.

The diagnosis of these concomitant affections is often difficult, and requires considerable attention. The epigastric and abdominal pains, and nausea, might appear as the forerunners of gastro-intestinal inflammation, if the slowness of the pulse, and the absence of heat of skin, did not indicate a state of internal congestion as their true source.

Prognosis.—The physician should always be guarded in his prognosis in this disease; for although it may appear mild and unimportant at the commencement, it may suddenly assume an intense character, and even terminate fatally. The age and constitution of the patient, and the duration of the eruption, and especially the amount of blood lost, should be taken into account in forming the prognosis. Purpura hæmorrhagica is generally a dangerous disease, and often terminates in death.

Treatment.—The treatment of purpura hæmorrhagica is exceedingly difficult. Medicines of a perfectly opposite character have been recommended at various periods for the cure of this disease. The general debility of the system would apparently indicate the exclusive employment of active tonic remedies; but in many cases they would be not only inefficacious, but absolutely injurious. Tonic medicines are only serviceable in case of children or persons debilitated by age, bad feeding, and general privation, being attacked, and even then they should be prescribed cautiously, and conjointly with hygienic measures. Those which we commonly employ are the decoction of bark, extract of rhatany, (in the proportion of a scruple to a drachm in the day,) old wine, dilute mineral acids, and succulent food, according to the age and habits of the patient. On the other hand, when the patient is young, robust, and plethoric, and there are pain and tension in the abdomen, together with hardness or frequency of pulse, and constipation, these remedies should be carefully avoided.

Purgatives have been strongly recommended in large doses, on the ground that the pain which is felt in the epigastric region, and in different parts of the abdomen, and the derangement of the digestive functions, is the result of congestion, and not of inflamma-

tion; a view which seems to derive support from the entire absence of fever in these cases, from the success of this mode of treatment, and also from *post mortem* examination. Those commonly used are turpentine, calomel, jalap, and castor-oil. Bleeding also seems to be indicated by the congested state of the system. Nevertheless, it should be very carefully and cautiously employed, in consequence of the hæmorrhage which succeeds it, which is often difficult to be arrested, and especially on account of its increasing the general debility of the system. Indeed, the only cases in which it is at all indicated, are where the patients are young and vigorous, and symptoms of inflammation are present, and when the hæmorrhage is not copious from the skin and mucous membrane.

The treatment which Biett found most successful, consisted in the employment of acidulated drinks and laxatives. In some cases he employed the extract of rhatany with much success. Brachet has also found this remedy very serviceable. Lotions, or injections of iced water, acidulated, and rendered styptic, and plugging, will be necessary when the hæmorrhage continues from any of the natural outlets of the body. As the blood does not coagulate or clot in these instances, every symptom should be carefully watched and promptly attended to. Cold ablutions of the entire body are sometimes useful; perhaps the cold shower-bath might also be advantageously employed; compresses saturated in vinegar and water, in a solution of the chloride of lime, or in a mixture of alcohol and water, may be applied to the purple and ecchymosed patches of the skin with advantage. The pains which sometimes exist in different parts of the body may be assuaged by opiates, emollient lotions, and cataplasms. During convalescence, the patient should live upon generous food, animal jellies, roast meat, good wine slightly diluted and iced, and should avoid damp or moisture. Tonics may be advantageously employed at this period.

The other varieties of purpura described by Willan are merely modifications of the foregoing. In purpura urticans, the patches are sometimes raised above the surrounding surface instead of remaining on a level with the skin; but this slight tumefaction disappears in the course of one or two days. Purpura senilis presents no other peculiarity than that of occurring in old people; and purpura contagiosa is merely the petechial eruption which

accompanies the severe forms of typhus fever. [Tannin, rhatany, the tincture of the sesquichloride of iron, the mineral acids, and turpentine, are the best remedies we know of in the treatment of purpura.]

ELEPHANTIASIS ARABUM.

Syn.—*Eolica Japonica; Sarcocele d'Egypte; Lepre Elephantiasis; Elephantiasis Tubereux;* Glandular Disease of Barbadoes; Barbadoes leg.

As we have already observed, two very different diseases have been described under the common name of elephantiasis. The one, —elephantiasis of the Greeks,—a tubercular affection, and accompanied by fawn colour of the skin, diminished sensibility of the parts, and loss of the eyebrows, eyelashes, &c. The other,—elephantiasis Arabum, which was first described by the Arabian writers,—is characterized by an indolent, hard enlargement or swelling of the skin, and of the subjacent cellular and adipose tissues, producing great deformity of the parts.

Elephantiasis Arabum may appear on any part of the body. It has been observed on the face, neck, breast, abdomen, scrotum, penis, pudendum, and margin of the anus; but the lower extremities seem to be the special seat of the disease. It appears more frequently on the legs than on any other part of the body, and imparts to them a singular and striking appearance. It seldom attacks both limbs at once, but usually fixes itself upon one side. The duration of elephantiasis Arabum is invariably long; it often continues during the life of the patient. Sometimes it disappears for a short time, and then reappears on the same or on some other parts of the body. It generally sets in with considerable rapidity, but soon assumes its characteristic chronic character.

Symptoms.—This is not a common disease in Europe. Several diseases have been described under this name which are different in their nature, or at least, the commencement of which is not characterized by acute inflammation of the lymphatics, and which still are followed by thickening and hardening of the subcutaneous cellular tissue. This was the case with two patients whom we saw at the

Hospital of St. Louis. The subcutaneous cellular tissue of the leg became the seat of chronic inflammation, which terminated in hypertrophy and hardness of the skin, and in enormous development of the limb.

In another case, a sailor who had been in the habit of constantly standing in the water, the disease supervened on the cicatrization of a varicose ulcer of the leg; the skin and subtegumentary tissues became hard and hypertrophied; it spread upwards, and the leg and almost the whole of the thigh were increased to double the natural size, and were hard, tense, shining, and very slightly painful. The disease was accompanied, in this case, by engorgement of the inguinal glands, which, however, was a consecutive symptom; for the lymphatic system did not appear at all affected in the early stages of the disease. Bouillaud records a similar case, in which the lower extremities of a young female became enormously enlarged, so as to resemble the legs of an elephant, resulting from obliteration of the crural and cava veins.—(*Archives Gén. de Méd.* tom. vi. p. 567.) In the great majority of cases, however, elephantiasis Arabum, consists of hypertrophy of the affected parts, an hypertrophy *sui generis*, which is essentially connected with the lymphatic vessels.

This disease frequently begins in rather a sudden manner, and without any premonitory symptoms. The patient suddenly experiences a violent deep-seated pain in the part about to be affected, which extends along the course of the lymphatic vessels. The latter become hardened and tense, and stretched in the form of a nodulated cord, which is often extremely painful to the touch, and extends to the glands of the groin or of the axillæ. When the disease attacks the limbs, as it most commonly does, erysipelatous inflammation supervenes, the subcutaneous cellular tissue becomes inflamed, and general engorgement and tumefaction of the parts ensue. These morbid conditions are accompanied by febrile symptoms—thirst, nausea, vomiting, rigors of considerable duration, succeeded by burning heat and often by copious perspirations. The brain is sometimes sympathetically affected, and delirium ensues.

All these symptoms, with the exception of the swelling of the limb, cease for a certain period and return again. At the end of each accession of these phenomena the chain of lymphatic vessels

loses it inflammatory appearance, but the swelling increases each time, and continues long after the other symptoms have ceased; and the limb becomes so hard as to resist the firmest pressure with the finger. The disease may go on in this manner for an indefinite period; and, when its progress becomes arrested, it may remain stationary for several years, when the limb exhibits that peculiar, unseemly appearance, and enormous development, from which the disease derives its name. Sometimes the swelling is even and continuous along the extremity; in other instances it is broken here and there by deep furrows, producing a hideous deformity.

Elephantiasis Arabum occasionally evinces a tendency to spread, and it gradually proceeds from the arm to the fore-arm, or from the leg to the thigh. The subcutaneous tissues continue the morbid alteration, and become, finally, converted into a soft, fungous, and even lardaceous substance. In other cases, again, it is confined to a single region, and may occasion but slight enlargement of the limb; but in every instance the palms of the hands, and the soles of the feet, are free from swelling, whilst these extremities are considerably tumefied in the lines of extension; evidently the result of the more compact nature of the cellular tissue in the former localities. Towards the close of the disease, the skin may present a variety of appearances. It may assume merely a sickly whitish colour, without any other morbid character; or the veins may be enlarged and distended, the skin grooved and furrowed in various parts; or it may be covered with varicose tumours, which give it a sort of livid appearance.

Independently of these, the skin may become the seat of other morbid alterations. Thus, for example, erythematous or even vesicular inflammation may supervene. In the latter event a slight exudation is established, and, at a later period, small, thin, soft, yellowish scabs. In other cases the roughness continues to increase, and scales, closely resembling those of ichthyosis, appear, or it becomes covered with small, soft, fungoid vegetations. Finally, fissures, excoriations, and ulcerations of the cuticle, covered with thick yellow scabs, may sometimes occur. The lymphatics are often hard and scirrhous. They suppurate, and sometimes even become gangrenous. Deep-seated indolent abscesses form on different parts of the limb, which is by this time enor-

mously enlarged, and pour out large quantities of fœtid pus. This disease attacks the limbs especially, and not unfrequently occurs on the penis, whence it generally extends to the scrotum. The penis sometimes attains a considerable size. Biett had a case in which its circumference was increased four-fold.

The mammæ also appear to be liable to this affection, and become so enlarged that they are obliged to be suspended with a bandage placed round the neck of the patient. Small isolated scirrhous tumours are often developed in these cases, which suppurate and give rise to incurable ulcerations. The sensibility of the parts is rarely destroyed in this disease; but the joints in the neighbourhood become the seat of chronic inflammation, adhesions take place, the articular movements are obstructed, and the limb becomes a useless encumbrance to the patient.

Causes.—Elephantiasis Arabum is neither contagious nor hereditary; it attacks, indiscriminately, males and females, rich and poor. It occurs most frequently in adults; but it occasionally appears in young people and in children. And even the induration of the cellular tissue of new-born infants (*sclerema*) seems to be related to this disease. It occurs principally in the West Indies. It is endemic in some of the tropical countries, in the torrid zone, near the equator, &c.; and its existence in these regions is attributed to the draughts and vicissitudes of temperature which occur night and morning. It sometimes results from obliteration of the veins of the leg, or parts affected; it also supervenes on cicatrization of old ulcers, and from chronic inflammation of the cuticle, extending to the subtegumentary tissues.

Autopsy.—The skin is generally indurated, covered with yellowish scabs, or with thick incrustations, and is sometimes furrowed and covered with small hard scabs, not unlike those of ichthyosis. 1. The epidermis is greatly thickened, furrowed, and firmly adherent. 2. The papillary bodies are highly developed, and perfectly distinct from the cutis. They are described by Andral and Chevalier as being elongated, enlarged, and prominent. 3. The true skin appears considerably thickened and hypertrophied, sometimes to the extent of more than half an inch. 4. The cellular tissue is also greatly increased in density, and sometimes contains within its meshes a semi-fluid gelatinous matter; but it is more

commonly indurated, slightly scirrhous, and becomes lardaceous as it approaches the cutis. 5. The muscles are generally pale, soft, discoloured, and atrophied. The veins are sometimes found obliterated, and, in the case related by Bouilland, this obliteration extended even to the vena cava itself. No other lesion is found which can be referred to this disease, except, occasionally, glandular engorgements in places remote from the seat of the disease.*

Diagnosis.—However distinct the inflammation and nodulated appearance of the lymphatics may be, it is not easy to say whether these symptoms are the forerunners of elephantiasis, any more than of those other diseases which they precede that never terminate in hypertrophy of the subcutaneous tissues. Even when elephantiasis is accompanied by all its characteristic phenomena, it may still be confounded with anasarca or with œdema. Indeed, it is not unlikely that these diseases have been mistaken for, and described as, cases of elephantiasis. However, the presence of general symptoms, and the morbid condition of some of the internal organs, in the one, or at least the softness of the tumour, its mode of development, and the state of the patient's health; and in the other, the progress of the disease, which is entirely local, the integrity of all the other organs of the body, the form, resistance, and indurated condition of the tumefied parts, are quite sufficient to distinguish these different diseases.

Prognosis.—The prognosis of elephantiasis Arabum is generally unfavourable, especially when it is of long duration, when the skin and subcutaneous strata are deeply and extensively

[* Recent observation has shown that the epidermis is not always thickened in this disease. The cutis is invariably more or less so. The subcutaneous cellular tissue is always thickened, from an increase of fat, or from condensed areolar tissue, sometimes resembling fibrous tissue in firmness. The muscles may be shrunk and atrophied, or in a state of fatty degeneration. The lymphatics are sometimes so brittle that they cannot be injected with mercury. The bones are also thickened considerably. Lebert found fibres, and bundles of areolar tissue, with fat cells and exudation corpuscles lying in the meshes. Fluid in considerable quantity is sometimes observed in the newly formed tissue, which contains both fibrine and albumen, and has a milky appearance.—B.]

involved, and when the disease arises from obliteration of the veins.

Treatment.—At the onset of the disease, when the lymphatics are inflamed and swollen, and when the eruption is much diffused, repeated bleeding should be employed, and this will not prevent the application of a number of leeches along either side of the nodulated lymphatic cords, a remedy which is often sufficient in itself, without general bleeding. Emollient poultices are also used in this stage. When the disease assumes the chronic character, as it almost invariably does, the treatment becomes more difficult. Both local and general bleeding have also been recommended in this instance, but evidently with little benefit. They are not appropriate remedies for the chronic form of elephantiasis Arabum. We have seen the limbs of patients suffering from that disease scarified all round, without deriving the slightest benefit or amelioration of the morbid structure. The same with regard to blisters and cauterization, and the internal use of mercury. Mercurial frictions have been proposed, and in our opinion are more likely to be beneficial than any of the foregoing measures. Our experience at the Hospital of St. Louis leads us to think that the best mode of treating elephantiasis is by compression, by iodine frictions, and by the vapour douche.

Compression is the best remedy that can be employed in this disease. It should be made with a long bandage, two or three fingers broad, and moderately tightened. It usually soon reduces the tumefaction of the parts; and if it does not restore them altogether to their natural condition, it facilitates the employment of other measures. Friction, with certain absorbent remedies, may be employed with some chances of success. An ointment, composed of a scruple to half a drachm of the iodide of potassium to an ounce of lard, rubbed over the swelling, is the best application of this kind. The use of this remedy must be suspended, if, as often happens in Elephantiasis Arabum, the diseased parts should become attacked with acute inflammation. The vapour douches are especially serviceable in these cases. By increasing the vitality of the part, they promote resolution, and contribute powerfully towards the cure of the disease. They should be applied for a quarter of an

hour at a time to the swollen parts, and during their administration the patient should rub the swollen and indurated surface briskly and repeatedly.*

Internal treatment is in general useless. The administration of purgatives appears occasionally to produce a good effect. The treatment should be modified when other affections accompany this disease. As for example, erythema, and an eruption of vesicles, often supervene during its progress, and induce smart inflammation of the skin. In these cases, emollient applications, and simple baths will be necessary; and at a later period sulphur baths may be usefully employed. In the great majority of cases, however, the disease will resist every plan of treatment. With regard to amputation, which has been both recommended and practised, we are of opinion that the cases where it is indicated are exceedingly rare; and we have seen a patient at the Hospital of St. Louis, whose leg had been amputated for elephantiasis Arabum, and in the course of a short period the disease attacked the left arm.

CHELOIDEA.

SYN.—*Keloide; Cancroide.*

This is a chronic tuberculated swelling of the skin, first described by Alibert under the names of crancroide and keloide, from its supposed resemblance to a crab or tortoise. It is an exceedingly rare disease, so much so that Bateman denied its existence. But nevertheless it does exist, and is distinguished from all other cutaneous affections by peculiar and well-marked characters.

It appears in the form of a slight tumefaction of the skin, which gradually enlarges. It forms small flat tumours, often of an irregular form, but commonly oval-shaped, with a slight depression

[* A case of this disease came under my observation about a year ago, in which the local application of the vapour of sulphur and iodine, together with the administration, internally, of the iodide of iron, was attended with success. The patient was a married woman, aged twenty-one, of a full and plethoric habit of body. The right leg and thigh were enormously enlarged, tense, hard, and painful at times. She suffered exceedingly for upwards of a year with this complaint, but is now in the enjoyment of good health.—B.]

in the centre. In other cases it is elongated, angular, and shining. The epidermis covering it is thin and wrinkled, which gives its surface the appearance of the cicatrix of a burn. It is hard and resistant to the touch, and its colour is sometimes deep, sometimes pale red. Moreover, this colour varies with the degree of temperature, and especially in women during the menstrual period. These small flat tumours only rise a few lines above the level of the skin, and this elevation is generally more marked on the circumference than in the centre. In the majority of instances there is only one small tumour present, but in others several appear together. We have seen a young woman in Biett's wards, with eight of these small flattened tumours on the neck and lateral parts of the breast. The tumours never exceed an inch and a half to two inches in their largest diameter, whilst they often do not exceed a few lines, especially when there are several present. They are often accompanied by deep, sharp, shooting pains, which occur most commonly after meals, and on atmospheric changes. But they are also frequently developed without the occurrence of any of these symptoms. This disease, when left to itself, advances very slowly. It rarely terminates in ulceration, and in some cases it fades and disappears spontaneously, leaving no other trace of its existence than that of a firm white cicatrix. The usual seat of the cheloidea is the chest, between the mammæ. They have also been met with on the neck and arms.*

Causes.—We have no precise knowledge regarding the etiology of this disease. It occurs in some cases, as we have seen, without being preceded or accompanied by either local or general symptoms. It sometimes appears to result from external causes; and we have seen it supervene on a deep scratch on the breast of a female. It has never been observed to attack children. It commonly appears in young people, and is not confined to either sex.

Diagnosis.—The cheloidea should be carefully distinguished from the cancerous affections, with which they have not the slightest analogy. In general, cancer of the skin gives rise to round, prominent, livid-coloured tubercular indurations, which

[* Velpeau describes two kinds of cheloide: 1. *Spontaneous*, or preceded by no known cause. 2. *Cicatricial*, or that forming on a scar, the shape of which it assumes.—B.]

ulcerate at the summit, and are surrounded by dilated veins. The neighbouring glands become engorged, and sometimes acquire an immense size. The cheloidea, on the contrary, when situated on the breast, consist in a flattish elevation, depressed in the centre, raised at the edges, and developed on a healthy surface. Neither should this affection be confounded with syphilitic tubercles, which are always copper-coloured, round at their summits, often assembled in clusters, generally intermingled with cicatrices, producing a loss of substance, and accompanied by other characteristic symptoms.

When the cheloidea are more numerous than usual, they are generally separated from each other by intervals of sound skin; they are rose-coloured, sometimes square, sometimes triangular-shaped, but never round like the syphilides. The cheloidea cannot be confounded with sanguineous tumours, which sometimes assume the form of vascular vegetations, and are either scattered or dispersed in groups. At first they do not rise above the level of the skin, but at a later period they extend, become yellowish, and take on the appearance of a true vegetation. The erectile tumours do not resemble this disease; they are generally of a brownish colour, granulated on the surface, broad at the base, deeply implanted in the skin, *soft* to the touch, and frequently moving with the pulsation of the arteries. In fact, the cheloidea have no real resemblance to any other disease.

Prognosis.—These tumours are never dangerous; and if they ulcerate, it is the result of injudicious treatment. They generally occur in persons whose health is otherwise perfectly good. There is some reason to believe that they may disappear, and leave only a slight cicatrix.

Treatment.—Extirpation and cauterization of the tumours does not seem to be attended with much benefit. The sulphur douche is sometimes used with advantage in softening the tumours. Friction with the iodide of potassium ointment, or the application of a plaster containing iodine and opium if there be any pain present, occasionally succeeds in reducing these swellings, and may be tried for the removal of them. We saw good results in one instance from the internal use of the iodide of potassium, in a case where the patches were numerous, and appeared to depend upon a strumous diathesis.

DISEASES OF THE NAILS.

[THE diseases of the nails, generally speaking, require surgical treatment, yet they are often associated with cutaneous eruptions, as, for example, psoriasis, ichthyosis, eczema, and the syphilides. The French writers describe a form of these diseases which they call *Alopecia unguale*, when the entire nail falls off, and is not renewed.

A very common and troublesome affection of the nails is that which is popularly termed "*the growth of the nail into the flesh*," and which most usually occurs by the side of the great toe. It does not, however, arise from any alteration in the nail, as its name would imply, but the contiguous soft parts are first swelled and inflamed by constant pressure against the edge from the use of tight shoes. If this state be permitted to increase, suppuration occurs, and an ulcer is formed with fungous and exquisitely sensible granulations, in which the edge of the nail is imbedded, and which often produces so much pain as totally to prevent walking.

Onychia maligna is a peculiarly unhealthy ulcer occurring at the root of the nail, either of the fingers or toes, but more frequently of the latter. It commences with a deep swelling, and an oozing of a thin ichor from under the fold of skin at the root of the nail, and lastly an ulcer is formed with a smooth tawny or brown surface, a very fœtid sanious discharge, and swelled, jagged edges of a peculiar livid, dusky hue. It is in general extremely painful, especially at night.

The *treatment* of the former consists in softening the nail by immersion in warm water, shaving it with a piece of glass as thin as possible, and rest for a day or two. Any ulcer that may have formed will soon heal with the aid of black wash on lint, or the application of lunar caustic. In some cases the nail will have to be re-

moved. The treatment of onychia recommended by Mr. Wardrop, is mercury to affect the gums in about a fortnight, when the swelling will generally subside, and the ulcer become clean. The best local applications are solution of arsenic (liq. arsen. ʒij. ad aq. ℥ij.) as recommended by Abernethy, or solution of the nitrate of silver, or black or yellow wash.*

The nails undergo changes in structure; sometimes they become soft, hypertrophied, or atrophied, deformed, bent, or thickened. The tendency to convexity in phthisis, which cannot be explained, is well known. The white spots occasionally observed on the nails, Valentin says are the result of imperfect development of the cells.

WARTS.

Warts are the result of hypertrophy of the papillæ and cuticle. The commonest variety is the wart which is so often met with on the hands or face of children and young persons, consisting of lengthened papillæ, each containing a vascular loop, and covered with hard, dry cuticle. If necessary to interfere, warts may be snipped off, or tied, or touched with the nitrate of silver or some other escharotic.

CORNS.

Corns are growths of thick cuticle, and are produced when the skin, situated over some projecting point of bone, is irritated by constant pressure or friction. They are divided into two kinds—hard and soft. The hard are situated on the surface of the foot, where the cuticle can become dry and hard; the soft, between the toes, where the cuticle is soft and spongy. For the soft corns between the toes, the nitrate of silver is the best application. The feet should be soaked in warm water to soften the cuticle, in the hard form, which may then be pared with a knife, and a plaster composed of equal parts of soap plaster and oil, spread on kid leather, should then be applied. The cuticle should be frequently thinned, or removed with a knife.†—B.]

* Vide, Druitt's *Surgeon's Vade Mecum*.

† Op. cit.

BIETT'S FORMULARY.

PRINCIPAL REMEDIES EMPLOYED BY BIETT AT THE HOSPITAL OF ST. LOUIS.

INTERNAL REMEDIES.

I.—PTISANS.

1. *Bitter infusions.*—Leaves of saponaria, half an ounce; boiling water, one pint. Infuse for half an hour; strain and sweeten. The infusions of chicory, hop, scabiosa arvensis, &c., may be prepared in the same manner. *Dose*—Indefinite. *Use*—In most chronic diseases of the skin.

2. Dried root of the lapathus, one ounce; boiling water, one pint. Infuse for six hours; strain and sweeten. The infusions of inula and burdock, may be prepared in the same manner. *Use and dose* as before.

3. Pounded gentian roots, one drachm; water a quart; boil for five or six minutes, and then add two drachms of bitter herbs. Infuse for two hours, strain and sweeten. *Dose*—Indefinite. *Use*—Chronic diseases of the skin. Scrofula.

4. *Acidulated lemonade.*—Dilute sulphuric acid, twelve to twenty-four drops; decoction of barley, one pint; syrup, q. s.

5. Hydrochloric acid, twelve to twenty-four drops; decoction of barley, one pint; syrup, q. s. Or,

6. Dilute nitric acid, twelve to twenty-four drops; infusion of saponaria, one pint; syrup, q. s. *Dose*—Three glasses daily. *Use*—Eruptions accompanied by pruritus. Lichen; eczema; some syphilitic eruptions.

7. *Alkaline mixture.*—Subcarbonate of potass, half to one drachm; bitter infusion, one pint. Or,

8. Subcarbonate of soda, half to one drachm; barley-water, one pint. *Dose*—Four glasses daily. *Use*—Lichen; prurigo; chronic diseases with itching.

9. *Laxative mixture.*—Sulphate of soda, half an ounce; infusion of chicory flowers, one pint. Or bitartrate of potass, two drachms; whey, one pint. *Dose*—Two or three glasses in the forenoon.

10. *Sudorific mixture.*—Scraped guaiacum, one ounce. Boil down to a pint in a pint and a half of water; strain and sweeten. The decoction of sarsaparilla or china may be prepared in the same manner. *Dose*—Two glasses in the morning, and two at night. *Use*—Syphilitic affections. Or,

11. Scraped guaiacum, one ounce; water, a pint and a half: boil down to a pint, and add a scruple of mezereon. *Dose* as above. *Use*—Biett often used this drink with success in cases of secondary syphilis. Or,

12. Sarsaparilla, one ounce; water as before; boil down to a pint, and add a drachm of coriander seeds. *Use* and *dose* same as above.

13. *Feltz's mixture.*—Sulphuret of antimony, four ounces; place in a small linen bag, and boil in water for an hour; then remove it and place it in a vessel with sarsaparilla, in pieces, three ounces; isinglass, fourteen scruples; water, six pints. Boil down to one half, and then strain. *Dose*—Three glasses a day; morning, noon, and night. *Use*—Constitutional syphilis.

14. *Zittmann's decoction.*—(i.) Sarsaparilla, twelve ounces; water, twenty-four pints; boil for two hours. Suspend in the liquid a linen bag, containing, sulphate of alumina, an ounce and a half; mercurius dulcis, half an ounce; sulphuret of mercury, one drachm. Towards the end add, liquorice, an ounce and a half; senna leaves, two ounces; anise seed, half an ounce. Remove from the fire, and allow the fluid to infuse. Strain so as to have sixteen pints of decoction No. I.

15.—(ii.) Take the residue of decoction No. I.; sarsaparilla, six ounces; water, twenty-four pints; boil for two hours, and add orange peel, cinnamon, cardamoms, of each three drachms; liquorice, six drachms. Infuse for an hour, and strain to sixteen pints. *Use*—Constitutional syphilis. *Dose*—The patient commences by taking, the evening before, six of the following pills, at intervals of one hour between them: jalap, two grains; gamboge, half a grain; aloes, four grains. On the following morning he begins early with half a bottle of No. I., taking a glass every half hour, while in bed. At midday a whole bottle of No. II. in glasses, every half hour. In the evening, the remainder of the bottle containing No. I. in glasses. The decoction is taken for twenty-two to forty-five days.

16. *Decoction of dulcamara.*—Dulcamara, half an ounce; water, a pint and a half. Boil down to two-thirds. The quantity of the remedy may be increased to one ounce, or an ounce and a half. *Dose*—Half a glass at first; then a glass, morning and evening. *Use*—Lepra vulgaris; chronic diseases.

17. *Decoction of orma.*—Orma pyramidalis, four ounces; water, four pints; boil down to a half. *Dose*—Two to four glasses a day. *Use*—Scaly diseases.

II.—MIXTURES. SOLUTIONS. SYRUPS.

18. Syrup of fumaria, twelve ounces; syrup of viola tricolor, four ounces; bisulphate of soda, two drachms. Mix. Biett often employed this mixture in cases of eczema, lichen, and several chronic diseases of the skin. *Dose*—Two spoonfuls a day.

19. Syrup of fumaria, a pint; bicarbonate of soda, three drachms. *Dose*—Two teaspoonfuls; one before breakfast, the other at bed-time. *Use*—Eczema; lichen; prurigo.

20. *Pearson's solution.*—Arsenite of soda, four grains; water, four ounces. *Dose*—From twelve drops to a drachm or more. *Use*—Most chronic diseases of the skin; eczema, impetigo, lichen; but chiefly in squamous diseases, lepra, psoriasis, &c.

21. *Fowler's solution.*—Arsenious acid, and carbonate of potass, of each seventy-eight grains; distilled water, a pint; alcohol half an ounce. *Use*—The same as Pearson's solution. *Dose*—Three or four drops, gradually increased to twelve or fifteen.

22. *Biett's solution.*—Arsenite of ammonia, four grains; water, four ounces. *Use*—Same as above. *Dose*—Same as Pearson's solution.

23. *Larrey's syrup.*—Sudorific syrup, one pint; bichloride of mercury, hydrochlorate of ammonia, and extract of opium, of each five grains; Hoffmann's liquor, half a drachm. *Dose*—Half an ounce to two ounces. *Use*—Syphilitic eruptions.

24. *Carbonate of ammonia mixture.*—Syrup of mezereon, two ounces; balsam of tolu, four ounces; subcarbonate of ammonia, half an ounce. *Dose*—A spoonful morning and evening. *Use*—Constitutional syphilis.

25. *Solution of hydrochlorate of lime.*—Crystallized chloride of lime, two drachms to half an ounce; distilled water, a pint; add syrup of gentian, eight ounces. *Dose*—One or two spoonfuls morning and evening. *Use*—Scrofulous lupus.

26. *Van Swieten's liquor.*—Bichloride of mercury, eighteen grains; water, twenty-nine ounces; alcohol, three ounces. *Dose*—A teaspoonful daily in a glass of decoction of sarsaparilla. Each

ounce contains a little more than half a grain. *Use*—Secondary syphilis.

27*a*. [*Donovan's solution of arsenic* contains protoxide of arsenic, $\frac{1}{8}$ grain; protoxide of mercury, $\frac{1}{4}$ grain; iodine (converted into hydriodic acid) $\frac{3}{4}$ grain. Formula for prescribing it:—Solution of hydriodate of arsenic and mercury, two drachms; syrup of ginger, half an ounce; distilled water, three ounces and a half. *Dose*—Two tablespoonfuls twice a day. *Use*—Scaly diseases.]

27*b*. [Oxalic acid, twelve grains; distilled water, twelve ounces. *Dose*—Half an ounce, three times a day. *Use*—Lichen and eczema. A very efficient remedy.]

III.—POWDERS. PILLS.

28. Sublimed sulphur, magnesia, of each half an ounce. Make eighteen packets. *Dose*—One daily. *Use*—Chronic eczema; scaly diseases.

29. Proto-iodide of mercury, twelve grains; extract of lettuce, two scruples. Make forty-eight pills. *Dose*—One to four. *Use*—Syphilis. Or,

30. Proto-iodide of mercury, half a drachm; extract of guaiacum, one drachm; extract of lettuce, two scruples; syrup of sarsaparilla, q. s. Divide into seventy-two pills. *Dose*—One, and then two daily. *Use*—Syphilis.

31. *Hydrochlorate of gold*.—Hydrochlorate of gold, two grains; gum arabic, six grains. Divide into twelve parts. *Dose*—One part rubbed upon the tongue twice a day. *Use*—Syphilitic eruptions.

32. *Bichloride of mercury*.—Extract of aconite, six grains; bichloride of mercury, two grains; marshmallows powder, eight grains. Make eight pills. *Dose*—One to four. *Use*—Syphilis.

33. *Biniodide of mercury*.—Biniodide of mercury, six grains; marshmallows powder, half a drachm. Make thirty-six pills. *Use*—The same. *Dose*—Two or three a day.

34. *Sedillot's pills*.—Strong mercurial ointment, one drachm; soap, two scruples; mallows powder, one scruple. Make thirty-six pills. *Dose*—Two or three daily. *Use*—The same.

35. *Biett's pills*.—Mercurial ointment, powdered sarsaparilla, of each a drachm. Make forty-eight pills. *Use*—The same. *Dose*—One to four daily. Or,

36. Phosphate of mercury, half a drachm; extract of fumaria, one drachm. Make forty-eight pills. *Dose*—One or two a day. *Use*—As before.

37. *Aconite pills*.—Extract of aconite, half a drachm; mallows

powder, two scruples. Make forty-eight pills. *Dose*—One or two morning and evening. *Use*—Syphilitic eruptions; nocturnal pains.

38. *Asiatic pills.*—Arsenious acid, one grain; black pepper, powdered, twelve grains; gum arabic, two grains; water, q. s. The arsenious acid and pepper to be rubbed together in an iron mortar for several hours, and the gum arabic and water to be then added. Make twelve pills. *Dose*—One or two a day.

39. *Arsenite of iron. Biett.*—Arsenite of iron, three grains; extract of hop, one drachm; mallows powder, half a drachm; orange flower syrup, q. s. Make forty-eight pills: each contains the one-sixteenth of a grain. *Dose*—One daily. *Use*—The two preceding formulæ are chiefly used in cases of chronic eczema and lichen; in the scaly diseases, lepra, lupus, and psoriasis.

40. *Arsenite of soda. Biett.*—Extract of aconite, one scruple; arsenite of soda, two grains. Make twenty-four pills. *Dose*—One or two daily. *Use*—As above.

41. [*Phosphorus pills.*—Phosphorus, three grains to one scruple; oil of cloves, ten minims to one drachm; mucilage, q. s. Make twelve pills. *Dose*—One to be taken twice a day in lupus, syphilitic tubercle, and inveterate scaly disease.]

42. [*Iodide of arsenic pills.*—Iodide of arsenic, one grain; liquorice powder, q. s. Divide into ten pills. *Dose*—One three times a day. *Use*—Lupus, lepra. The iodine acts on the absorbent system while the arsenic alters the vitality of the skin.]

43. *Hydrochlorate of iron.*—Hydrochlorate of iron, twelve grains; gentian, in powder, twenty-four grains. Make twelve pills. *Dose*—One to four daily. *Use*—Employed with success by Biett in scrofulous eruptions.

44. *Sulphate of iron. Biett.*—Sulphate of iron, one scruple; powdered mallows, twelve grains; syrup, q. s. Make twelve pills. *Use and dose* the same.

EXTERNAL REMEDIES.

I.—CATAPLASMS. LINIMENTS.

45. *Potato poultice.*—Potato flour, infusion of marshmallows, of each, q. s. Mix the flour with a little cold water, and then boil it. Biett commonly employed this poultice with great benefit, in cases of eczema, impetigo, mentagra, &c.

46. *Charcoal poultice.*—Powdered charcoal, linseed meal, and warm water, of each, q. s. *Use*—In ulceration after ecthyma, &c.

47. *Conium poultice.*—Conium, two ounces; water, two pints. oil away one quarter, and to this add ground flax seed, q. s. *Use* ℞ Scrofulous ulcers.

48. Marshmallows infusion, one pint; solution of sub-acetate of lead, one to two drachms. A lotion in cases of lichen or chronic eczema. Or,

49. Dulcamara, hyoscyamus, solanum nigrum, of each a handful. Boil together with some marshmallow roots, and use for the purpose of moistening compresses. Lichen, acne. Or,

50. Cyanuret of potassium, twelve grains; emulsion of bitter almonds, six ounces. In chronic eruptions with itching. Or,

51. Hydrocyanic acid, two drachms; corrosive sublimate, two grains; emulsion of bitter almonds, ten ounces. *Use*—As above. Or,

52. Extract of belladonna, two drachms; lime water, eight ounces; oil of sweet almonds, four ounces. A liniment. *Use*—For the inflamed surfaces in cases of eczema and impetigo. Or,

53. Alum, three drachms; hydrochlorate of ammonia, one drachm; Bareges water, one ounce; water, half a pint. A lotion, towards the termination of eczema and impetigo. Or,

54. Subcarbonate of potass, one drachm; sublimed sulphur, two drachms; water, a pint. *Use*—In prurigo, especially when the itching has diminished. Or,

55. Acetate of ammonia, three ounces; alcohol, four drachms; rose-water, four ounces. In lichen. To be applied with a fine sponge when the pruritus is excessive. Or,

56. Sulphuret of potass, one drachm; white soap, two drachms; distilled water, eight ounces. *Use*—In prurigo, scabies, porrigo.

57. Sulphate of zinc, acetate of lead, of each one scruple; rose-water, five ounces; mucilage of quince, one ounce. In some cases of eczema, and impetigo of the face.

58. Nitric and hydrochloric acids, of each twenty drops; distilled water, ten ounces. *Use*—Lichen, chronic eczema.

59. *Alkaline lotion.*—Subcarbonate of potass, distilled water, of each two drachms: mucilage of bitter almonds, eight ounces. *Use*—Lichen, prurigo.

60. *Gowland's solution.*—Bichloride of mercury, one, two, or three grains; emulsion of bitter almonds, six ounces. *Use*—Porrigo.

61. *Dupuytren's lotion.*—Sulphuret of potass, four ounces; sulphuric acid, half an ounce; water, two pints. *Use*—Scabies.

62. *Barlow's lotion.*—Sulphuret of potass, white soap, of each two drachms; lime-water, seven ounces; alcohol, one drachm. *Use*—Porrigo.

63. *Jadelot's liniment.*—Sulphuret of potass, six ounces; white

soap, two pounds; olive-oil, two pints; oil of thyme, two drachms; *Use*—Scabies and prurigo.

64. [*Glycerine lotion.*—Glycerine, two ounces; bichloride of mercury, six grains; chloroform, twenty drops; rose-water, six ounces. *Use*—To allay itching in the papular and vesicular eruptions.]

65. [Collodion, (a solution of gun cotton in ether,) is a good substitute for adhesive plaster, from drying almost instantly when applied to the skin. It protects the parts from the atmosphere, and enables them to heal under it.]

66. [Bicyanuret of mercury, two grains; distilled water, one ounce. *Use*—Eczema; lichen.]

II.—OINTMENTS. POWDERS.

67. *Alkaline ointment.*—Subcarbonate of potass, two drachms; lard, two ounces. *Use*—In pustular diseases and porrigo.

68. *Compound alkaline ointment.*—Subcarbonate of soda, two drachms; extract of opium, ten grains; slaked lime, one drachm; lard, two ounces. *Use*—In some cases of prurigo.

69. *Ointment of cyanuret of potassium.*—Oil of bitter almonds, two drachms; cyanuret of potassium, twelve grains; Galen's cerate, two ounces. *Use*—In lichen and prurigo, when the skin is very dry and the itching excessive.

70. *Hydrocyanic cerate.*—Hydrocyanic acid, twenty drops; cerate, two ounces. *Use*—In syphilitic ulcers.

71. *Ointment of cyanuret of mercury.*—Cyanuret of mercury, three to six grains; lard, one ounce. *Use*—As above.

72. *Ointment of carbonate of lead.*—Subcarbonate of lead, two drachms; prepared lime, half an ounce; Galen's cerate, two ounces. *Use*—In papular eruptions with itching.

73. *Chloride of lime ointment.*—Powdered chloride of lime, half an ounce; sweet almond oil, two ounces; lard, three ounces. *Use*—As above.

74. *Proto-chloride of mercury ointment.*—Proto-chloride of mercury, twenty grains to a drachm; lard, one ounce. *Use*—In most chronic diseases, and towards the end of some scaly affections. Or,

75. White precipitate of mercury, half a drachm; camphor, ten grains; almond cerate, one ounce. *Use*—In acne and sycosis.

76. Proto-chloride of mercury, and acetate of lead, of each two scruples; camphor, six grains; lard, half an ounce. *Use*—For tubercles.

77. *Ointment of binoxide of mercury.*—Binoxide of mercury,

half a drachm; camphor, four grains; lard, an ounce. *Use*—In papular diseases of the face.

78. *Sulphuret of mercury ointment.*—Sulphuret of mercury, half a drachm; camphor, ten grains; cerate, one ounce. *Use*—In chronic vesiculo-pustular affections.

79. *Subsulphate of mercury ointment.*—Subsulphate of mercury, one scruple; camphor, six grains; purified lard, one ounce. *Use*—Same as last.

80. *Ointment of proto-nitrate of mercury.*—Proto-nitrate of mercury, one scruple; lard, one ounce. *Use*—In lepra and psoriasis.

81. *Iodide of mercury ointment.*—Proto-iodide of mercury, twelve to twenty-four grains; lard, one ounce. Or, bin-iodide of mercury, twelve grains; lard, one ounce.

These preparations were introduced by Biett, and are extremely efficacious. Biett chiefly employed them in syphilitic eruptions, and in certain forms of inveterate scaly disease. The preparation with the biniodide is by far the more active, and should therefore be applied to a much smaller surface of the skin. It is occasionally used as an escharotic in lupus.

82. *Iodide of sulphur ointment.*—Iodide of sulphur, fifteen to thirty grains; lard, one ounce. This preparation was also introduced by Biett; and, next to the former one, is that on which most reliance is to be placed. It is chiefly suited to cases of acne, prurigo, and scaly diseases.

83. *Depilatory ointment.*—Subcarbonate of soda, two drachms; lime, one drachm: lard, one ounce. *Use*—In porrigo.

84. *Hydriodate of ammonia ointment.*—Chloride of ammonium, eighteen grains; mutton suet, half an ounce; sweet-almond oil, two drachms. *Use*—As above.

85. *Hydriodate of potass ointment.*—Iodide of potassium, half a drachm; lard, one ounce. *Use*—Scrofulous ulcers, some papular eruptions, Arabic elephantiasis.

86. *Iodine ointment.*—Iodine, fifteen grains; iodide of potassium, one drachm; Rousseau's laudanum, two drachms; lard, two ounces. *Use*—As above.

87. *Soot ointment.*—Soot, one drachm; lard, two ounces. *Use*—In porrigo.

88. *Sulphur and charcoal ointment.*—Powdered charcoal, one ounce; sublimed sulphur, two ounces; lard, five ounces. *Use*—In porrigo.

89. *Sulphur and cinnabar ointment.*—Cinnabar, two drachms; sublimed sulphur, half an ounce; laudanum, two drachms; lard, five ounces. *Use*—Scabies and prurigo.

90. *Pringle's ointment.*—Root of the white hellebore powdered, two drachms; hydrochlorate of ammonia, one drachm; lard, two ounces. *Use*—As above.

91. *Helmerich's ointment.*—Sublimed sulphur, half an ounce; subcarbonate of potass, two drachms; lard, two ounces. To be divided into four portions. *Use*—Scabies. A portion is to be rubbed in, night and morning, over the affected parts.

92. Sublimed sulphur, half an ounce; hydrochlorate of ammonia, two drachms; lard, two ounces. *Use*—As above.

93. Sublimed sulphur, five ounces; subcarbonate of potass, two ounces; water, one ounce; olive oil, four drachms. Dissolve the potass, then add the oil, and incorporate the sulphur. *Use*—Scabies.

94. *Banyer's ointment.*—Litharge, two ounces; calcined alum and calomel, of each one ounce and a half; Venice turpentine, half a pound; lard, two pounds. *Use*—Same as last.

95. Sublimed sulphur, white soap, of each two ounces. Dissolve the soap in a sufficient quantity of water, and add the sulphur gradually. *Use*—Scabies.

96. Sublimed sulphur, white soap, of each half an ounce; lard, two ounces. *Use*—Scabies.

97. *Willan's ointment.*—Subcarbonate of potass, half an ounce, red sulphuret of mercury, one ounce; rose water, one ounce; oil of bergamotte, half an ounce; sublimed sulphur, and lard, of each nine ounces. *Use*—Scabies.

98. *Turner's pitch ointment.*—Pitch, half an ounce; lard an ounce. *Use*—Scabies. This ointment was in much repute about the middle of the last century.

99. *M. Giroux's ointment.*—Pitch, two drachms; laudanum, a drachm; lard, an ounce. *Use*—In prurigo and scaly diseases.

100. [*Phosphorus ointment.*—Phosphorated ether, one drachm; cerate, freed from water, five drachms. *Use*—To be applied in cases of lupus, syphilitic tubercle, acne rosacea.

101. *Juniper ointment.*—Oil of juniper, one ounce and a half; mutton suet, half an ounce; hog's lard, one ounce and a half. *Use*—Eczema.]

III.—CAUSTICS.

102. *Nitrate of silver lotion.*—Nitrate of silver, half a drachm; distilled water, six drachms. *Use*—In rupia; impetigo. A feather moistened with the lotion is passed over the diseased surface, which, immediately afterwards, is copiously sprinkled with water.

Dilute sulphuric, nitric, or muriatic acids, may be employed in the same manner.

103. *Binitrate of mercury.*—Proto-nitrate of mercury, one, two, or three drachms; nitric acid, an ounce. Lupus, syphilitic eruptions. A brush, moistened with the caustic, is passed lightly over a small extent of the diseased surface. The animal oil of Dippel, and the butter of antimony, are employed in the same way.

104. *Côme's powder.*—White oxide of arsenic, ten grains; sulphuret of mercury, two scruples; animal charcoal, powdered, ten grains. *Use*—Ulcerated lupus. A small quantity to be moistened on some solid body, and spread with a spatula over a surface not to exceed three quarters of an inch in diameter.

105. *Dupuytren's powder.*—Arsenious acid, eight to twelve grains; calomel, an ounce. Mix carefully. *Use*—As above. This is a milder caustic, a small quantity of which is to be sprinkled over a surface, so as to form a thin covering.

106. *Chloride of zinc pastes.*—No. I. Flour, two parts; chloride of zinc, one part.

107. No. II. Flour, three parts; chloride of zinc, one part.

108. No. III. Flour, four parts; chloride of zinc, one part. Mix the zinc with the flour, adding as little water as possible; then expose the paste to the air, until it absorbs enough of moisture to be fit for use. The dermis should be exposed before the paste is applied.

109. *Antimonial paste.*—Chloride of antimony, one part; chloride of zinc, two parts. Add flour according to the strength desired. *Use*—As above.

110. *Vienna caustic.*—Caustic potass, and unslaked lime in powder, equal parts. *Use*—As above. This paste is diluted with alcohol, and applied with a spatula over a very small surface.

IV.—BATHS. FUMIGATIONS.

111. *Emollient bath.*—Potato-flour starch, one pound; cold water, one quart. Mix and add four quarts of hot water; then boil to the consistence of a paste, and add the latter gradually to the bath.

112. *Gelatine bath.*—Prepared gelatine, a pound; dissolve in a quart of warm water; add four quarts of warm water, and boil for a quarter of an hour. Mix with the bath.

113. *Acid bath.*—Muriatic acid two to four ounces; water, four hundred and sixty quarts. *Use*—Chronic prurigo and lichen.

114. *Alkaline bath.*—Subcarbonate of soda, four to eight ounces; water, fourteen pails. *Use*—Chronic diseases of the skin.

115. *Sulphur baths.*—Sulphuret of potass, four to six ounces; water, fourteen pails. *Use.*—Chronic eruptions. To mitigate the action, if necessary, some starch or gelatine may be added.

116. *Iodine bath.*—Iodine, two to four drachms; iodide of potassium, four to eight drachms; water, fourteen pails. *Use*—As above.

117. *Mercurial bath.*—Bichloride of mercury, from twenty-four grains to half an ounce, gradually; water, fourteen pails. *Use*—Scaly and syphilitic eruptions.

118. *Sulphur fumigation.*—Sulphur, half an ounce; evaporate on a warm plate, in an apparatus *ad hoc.* *Use*—Scabies; scaly diseases; lichen; prurigo.

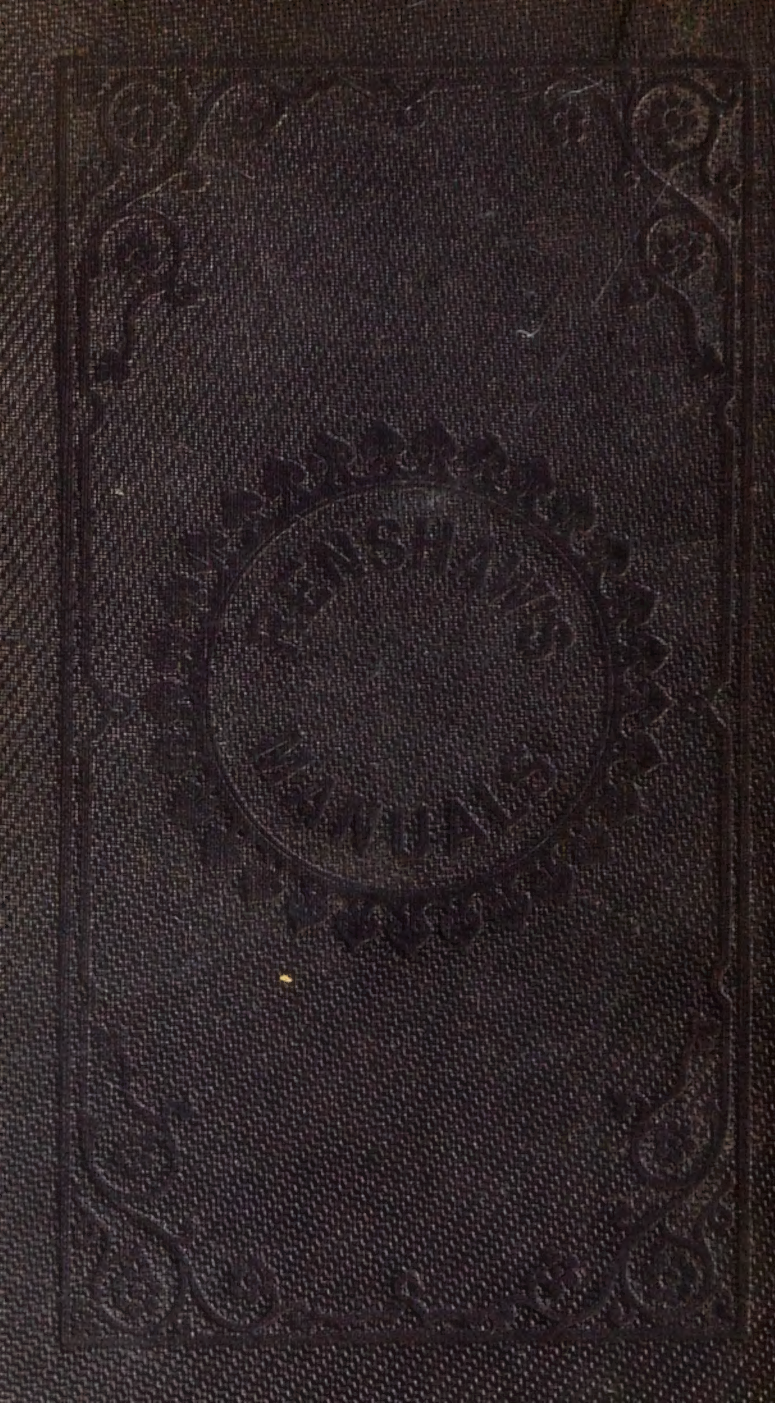
119. *Cinnabar fumigation.*—Cinnabar, half an ounce to one ounce. The cinnabar is volatilized with five or six ounces of water in D'Arcet's apparatus, at 54° R. The patient remains in it for fifteen to twenty minutes. *Use*—Prurigo; syphilitic eruptions. General fumigation is not readily supported; hence Biett invented an apparatus for the purpose of fumigating locally.

120. *Vapour baths and douches.*—This is the best form in which baths can be administered; they are suited to almost every species of chronic disease of the skin. The patient may employ them for fifteen to twenty minutes, at a heat of 40° to 42° R.

INDEX.

* For these and other medicinal preparations, see also Formulary.

THE END.


MANUALS